

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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NOTES OF THE WEEK.

To Our Readers.—In looking back upon the year that has closed, it is a pleasure to remember the wide and varied correspondence which has reached us from our many readers on subjects of gardening interest, and to feel that a pleasant relationship has existed between Editor and readers, many of whom have freely written of their difficulties and as freely offered the benefit of their knowledge and experience. In the year that has now commenced we trust that many more will write to us about their gardens. To those who have so kindly sent notes of interest during the past year, and also to those who have assisted in making THE GARDEN better known, we tender our best thanks, and to all our readers we wish greater success and happiness during 1912 than they have ever experienced. With this issue is presented an almanack giving the dates of the principal horticultural events of the year.

The Garland Rose.—It may be worth recording that this has been one of the most satisfactory of garden Roses during the past year. Throughout the month of July a hedge of the grand Hybrid Musk Rose in a Berkshire garden was literally smothered with large clusters of fawn-coloured buds opening nearly white, and at the time of writing (January 2) the hedge is bright with orange red hips, even though armfuls have been cut for decorative purposes during the festive season. It is not usual, however, for the hips of this Rose to assume such a high colour as they have done this winter.

Fruit Trees Growing in Grassland.—The thirteenth Report of the Duke of Bedford's Experimental Fruit Farm at Woburn is mainly devoted to experiments which have been conducted there for some years with trees growing in grassland. In all cases the results show that grass has a very injurious effect upon the health of the trees, a fact that has been generally understood for some years past. Young trees seem to suffer more than old ones in this respect, the latter, apparently, becoming to some extent immune from the harmful influence. We hope to refer more fully to the report in a future issue.

Flower Show at Holland House.—Fellows of the Royal Horticultural Society will rejoice to learn that the great summer show of the society will this year again be held in the beautiful grounds of Holland House on July 2 and following days. It is idle to object, for the fact remains that in fine weather the open-air shows at Holland House were the most attractive and delightful of all the exhibitions of the society. The experiment of holding a great midsummer flower show in the huge building of Olympia was anything but a success.

Apart from the excessive heat, the building and its surroundings were much too ungainly to enable any floral arrangement in it to be really beautiful. With no Temple Show and the International Exhibition in Chelsea Hospital Grounds hardly a society's or Fellows' exhibition, it will be no matter for surprise if the minds of Fellows turn with feelings of profound gratitude to the Dowager-Countess of Ilchester for her kind consent to allow the summer exhibition to return again to Holland House.

The Winter-flowering Jessamine and Ivy.—Jasminum nudiflorum is well worth a place in any garden, for it flowers in midwinter when outdoor flowers are scarce. It is usually planted against a wall; but quite recently an effective method of open ground culture was noted. In company with Ivy it had been planted to grow over an old tree butt, and the long, slender, flower-laden branches of the Jessamine were intermixed with the Ivy in such a manner that the mass of Ivy appeared to be studded with golden blooms. The same combination was also noted on an old wall, where both plants were allowed to grow freely, the Ivy having assumed its bushy form.

Epimediums in Winter.—Looking through the garden on Christmas Day, we were pleased to observe that there were still some pretty leaf-colouring effects. The Epimediums were specially good, their bronzy leaves having lost none of their colouring, despite the wet and stormy weather which prevailed for so long. The pleasing form of the foliage is also an attraction, and the plants come in excellently for the decoration of the table. They look well by themselves, and their presence along with Chrysanthemums and other seasonable flowers is highly pleasing. E. perralderianum is perhaps the most useful on account of its taller stature, giving longer stems, while the leaves are also good in colour.

A Free-flowering Stove Climber.—For many weeks past a plant of Ipomœa Horsfalliæ Briggsii, an old, well-known stove climber, has been covered with rich crimson blossoms in the Victoria Regia House at Kew, where it serves to show that for a winter-flowering plant for the roof of a tropical house it is still one of the best plants obtainable. Once established it does not give a great deal of trouble, for if cut back annually and a few of the summer shoots are trained to cover the available space, the remaining shoots may be allowed to hang naturally from pillar or roof, and flowers will appear from almost every leaf-axil. Although the best results are obtained from specimens growing in well-drained borders of good soil, fine plants are sometimes seen growing in large pots, any deficiency in the amount of soil being made up by extra feeding.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Tea Roses on New Year's Day.—When making a friendly call on Mr. Prince of Longworth, I was greatly surprised to see many Tea Roses in flower outdoors. Among the best were White Maman Cochet, Souvenir d'un Ami and Mme. Jules Graveraux. Such Hybrid Teas as Mme. A. Chatenay and Arthur R. Goodwin also carried a few blooms. Best of all were some lovely blooms of W. R. Smith. This variety, somewhat like White Maman Cochet, is as yet underrated. When better known it will be widely cultivated. There is some doubt as to which class it belongs. Some growers list it as a Tea, and others as a Hybrid Tea.—C. W. B.

Gold Medal Awards to Roses.—The Rev. J. H. Pemberton reiterates his assertion that gold medal Roses may be, and not infrequently are, unworthy of the awards made to them. Nothing more conclusive could be offered against the making of such awards. It is very well to excuse such awards on the ground that they are made to what just at the time seems to be the best new or seedling Rose presented; but the general public, not familiar with that admission, are apt to be guided by traders' statements that such ones are gold medal Roses, and therefore merit all possible distinction, and perhaps price. Would it not be far wiser to follow the practice of the National Sweet Pea Society and make no awards to new varieties until tested by a season's growth? The National Rose Society may have no trial-ground for such purpose, but surely the Royal Horticultural Society would allow such trials as may be needed to be carried out at Wisley, where Roses of all sections do wonderfully well. Probably, after such tests were undergone, gold medal awards would be fewer.—A. D.

Rhus Toxicodendron in Canada.—Although I have noticed one answer from this side of the ocean to your correspondent on the question of *Rhus Toxicodendron*, I am tempted to add some words upon the subject. I note that, according to your first correspondent, it is being sold at home as *Ampelopsis Hoggii*. It is no relation to the *Ampelopsis*, though in some points it might at a casual glance be mistaken for one. The *Ampelopsis* belongs to the Grape Vine family, and is represented in the wild state by *Ampelopsis quinquefolia*, whose leaves have from three to seven (but generally five) leaflets, oblong lanceolate and sparingly serrate. *Rhus Toxicodendron* belongs to the Cashew family, and is one of the Poison Sumachs. Its leaves are of three leaflets, are more ovate, downy, notched and sinuate. These questions of botanical accuracy are of moment, for it is important that so noxious a plant as this *Rhus* should not be allowed to pose as a harmless *Ampelopsis*. The poison is not a temporary and light matter like that of the Stinging Nettle. The rash which it produces over face, hands, arms and legs is of an inflammatory nature, and recurs for three years in some cases. As a doctor's wife I can speak with authority about its very bad effect upon many people's constitutions. My husband's brother and his wife brought trails of it home one day from the woods under the impression that it was the *Ampelopsis*, and their botanical expedition cost them three weeks in bed! We employ people to go and cut it away

and root it out when it is found near country houses.—R. J. ELLA BAINES, *Toronto, Canada*.

Bottling Pears.—Can any reader give me any information about bottling Pears? I find that several weeks after the fruits are bottled, the bottles burst. The system adopted is to bring the fruit nearly to the boil in the bottles, and then seal with screw tops. This way is very satisfactory with everything but Pears.—M. F. H.

Euphorbia Wulfenii.—After several years of disappointment, exactly corresponding with a preceding cool, rainy summer, there is a grand promise of bloom on this monumental plant, clearly showing its need of a dry, warm season in which to ripen up well in preparation for flowering. On some plants nearly every shoot shows, by the point now crooking downwards, that there is a bloom coming. The display in May should be grand, and is already a pleasure to look forward to. It would be interesting to know if—as I fully expect—this observation can be endorsed by others who grow this grand plant.—G. JEKYLL.

Cypripedium insigne.—During December and January, when flowers for house decoration are so scarce, a few pots of this fine old *Cypripedium* are a valuable possession. With four or five blooms and some foliage whose colour closely associates with their own, such as that of the variegated *Elæagnus*, *Cassinia* and Golden Privet, room bouquets may be made that are not only of unusual and distinguished appearance, but that will endure, with due refreshing of the water, for from three to four weeks. I do not in general care for shrubs with variegated leaves, except for special treatment in garden colour-schemes, but always have some bushes of the *Elæagnus* and the Privet for their usefulness for winter cutting.—G. J.

Coronilla glauca.—Before *Cytisus racemosus* became so universally grown for market and for general decorative purposes, this *Coronilla* was much more popular than it is now, and was to be met with in greater or lesser numbers in nearly every garden. The combination of pretty glaucous foliage and clear yellow flowers is very effective, and a well-flowered example of this *Coronilla* is most pleasing. The "Dictionary of Gardening" gives its flowering period as May to September, but it is now blooming freely, and has been for some time. It is a native of the South of Europe, and little more than protection from frost is necessary to its well-doing. There is a variegated-leaved form, but it is not often seen now.—H. P.

Primula malacoides and P. Forbesii.—Some time ago there appeared in THE GARDEN an article pointing out the usefulness of the above Primulas for cutting and decorative purposes, and also drawing attention to the easy way in which these could be grown from seed. I would like to give my experience in regard, first, to *malacoides*, of which I have found there are two distinct forms, one which is practically devoid of scent, and the other the leaves of which are strongly Pine-apple scented. The former is much smaller in flower, less vigorous in habit, and, so far as I have seen, does not seed. The other, which is more robust in growth, carries much larger flowers, and the leaves, especially when crushed, emit a strong Pine-apple scent. This form seeds readily. With regard to *Forbesii*, I note in my collection two very distinct colours, one a light lilac and the other a deep magenta which is catalogued as *rubra*. I send you the two forms of *malacoides*, and you can verify for yourself my statements

regarding them. I also send you the two colours of *Forbesii*.—JOHN MACWATT, *Morelands, Duns*. [The flowers sent fully bear out Dr. MacWatt's statements.—ED.]

The Demand for Alpine Flowers.—From a large trade cultivator of alpine flowers I hear of a steadily-increasing demand for alpine. This is having the effect of making it difficult to maintain a stock of the slower-growing genera and species, with the result that stocks of these, often among the finest of the alpine flora, are being depleted. I was interested to learn, for example, that even the *Gentianella* is getting scarce in the trade in good plants, and the purchaser in search of this lovely flower will not be content with a small crown or two, but covets a good clump.—S. ARNOTT.

Rex Begonias as Wall Plants.—Are not these ornamental subjects being a little neglected nowadays? When properly grown they are highly effective with their handsome leaves, and I see them occasionally employed in a very attractive way on the back wall of lean-to houses devoted to stove Ferns. One of the best effects I have seen of the kind was in a Liverpool garden, where a large stove had the back wall covered with wire-netting, through which were growing Rex Begonias, Selaginellas and choice Ferns. The wall looked exceedingly well, and I was reminded of it by seeing a somewhat similar arrangement in a smaller garden the other day.—A. M. D.

Plunging Roman Hyacinths.—Once again I have satisfied myself that the instructions so frequently given to plunge Roman Hyacinths, after potting in beds of ashes or Cocoanut refuse, so as to keep them in the dark, is absolutely unnecessary, and so is hard forcing to induce them to flower by Christmas. For some years now I have simply potted the bulbs towards the end of August or quite early in September, and placed them in a cool greenhouse. There they root readily enough, and as the nights get colder and a little fire-heat is given, they push up freely. In this way the earliest blossoms open in the first or second week in December, and by Christmas they are in good condition. What is more, the plants are far sturdier and more healthy-looking than those which have been hard forced.—P.

Out-door Flowers in Ireland.—As evidence of the extraordinary mildness, so far, of the present winter in this locality, it may be of interest to record that on December 31, in my garden here, I had in bloom the following: Christmas Roses, Polyanthus (in profusion), Auriculas, Winter Gladiolus, Chrysanthemums, Stocks, Wallflowers, Violets, Aubrietia and Hepatica. The Winter Jessamine was in full bloom. There was a mass of *Laurustinus* and, more remarkable still, a row of Ivy-leaved Geraniums, not removed in autumn, were still blossoming freely. On a sheltered wall there were blooms of a Gloire de Dijon Rose, an old Monthly Rose in another corner steadily pushes out a bud or two, and even a W. A. Richardson Rose tries to show its colour. The Snowdrops and Crocuses were all well above ground together with masses of Daffodils and other Narcissi of sorts. Old roots of yellow Calceolarias, from which a stock of cuttings were taken in late autumn, were flourishing gaily in the open. Of course, we shall get a set-back yet before spring opens, but it is pleasant to see such life in the garden at this generally dead time of the year.—S. A. W. WATERS, *Stillorgan, County Dublin*.

A Dwarf Shrub for Midwinter.—The value of such a shrub as *Olearia nummularifolia* is even more recognisable in midwinter than at any other season, and as this is written in the closing days of the year, several small bushes in my garden are very pleasing indeed. It is a slow grower, and therefore the more useful in small gardens, and plants not less than seven years old from cuttings are only about two and a-half feet high on dry soil. They are very pretty indeed with their small, thick, hard, glossy leaves closely set on the upright bushes. At this season there is a golden tinge about the green leaves which is particularly pleasing. It is not the best of Daisy bushes as a flowering plant, yet it ranks high as a foliage one.—A. M. D.

An Early-flowering Christmas Rose.—*Helleborus niger altifolius* has been in flower here since early in December, and it makes one regret that it is so comparatively expensive that it cannot be purchased in clumps without a considerable outlay. Yet it is so handsome and so much ahead of the ordinary *H. niger* that it is worth purchasing. It is one of the finest of all Christmas Roses, growing taller than the others, and bearing very large and handsome white flowers, which are tinged with pink, although this does not show so much on blooms which are covered by glass.

Late Flowering of Winter Heaths.—The prolonged period of wet weather we have experienced in the later months of 1911 has had the effect of retarding *Erica mediterranea hybrida* longer than usual, and at Christmas it could not be called open, although it had been laden with sprays of flower in bud for some time. A good deal, however, seems to depend upon the position, as I observe that a plant of *Erica carnea alba*, on a higher and more exposed place, had a good deal of flower open a week before Christmas, while another of this white Heath, close to the plant of *E. m. hybrida* referred to, has not a bloom fully open. Yet I have had the latter open in the same spot in early November more than once.—S. ARNOTT, *Dumfries*.

Dombeya Mastersii.—The genus *Dombeya* comprises some thirty species of handsome evergreen shrubs or small trees, all of which are natives of Africa or the Mascarene Islands. It is unfortunate that they are not more generally cultivated. A species worthy of attention is *D. Mastersii*, of which there is a fine specimen now flowering in the Temperate House at Kew, where it is planted out in a border. The fragrant pearl white flowers, about an inch in diameter, are produced in axillary corymbs towards the end of the loosely-spreading branches; the leaves are heart-shaped and velvety, from 3 inches to 6 inches long and 2 inches to 5 inches wide. It is a most valuable plant for winter decoration, as it commences to bloom during October and continues through the winter and early spring months. This *Dombeya* will thrive and flower freely under ordinary greenhouse treatment, and may be successfully grown in large pots or tubs, using a compost of rich sandy loam, to which a small proportion of peat or leaf-soil should be added. After the flowering period is over, the plant may be pruned hard back, when it should be placed in moist heat to induce it to break freely. Cuttings of firm young shoots will root when inserted in sandy soil during March and April. They require to be placed in a propagating-case with bottom-heat. *D. Mastersii* is a native of Tropical Africa.—W. T.

TREES AND SHRUBS.

CAMELLIAS AS OUTDOOR SHRUBS.

ONE of the best hardy flowers that was in full bloom with us towards the end of November was the fine single Japanese Camellia *Sasanqua Mikiniki*. This, both on a wall and in the open, was flowering profusely, and it is therefore very valuable, as scarcely any other shrub was then in bloom. The plant had just previously experienced 8° of frost and showed no signs of injury. Camellias, as a rule, are treated much too tenderly. Out of the many hundreds in these gardens, not a plant has been damaged by the great heat of last summer, nor by the great snowstorm and frost last April. At many places in Kent, Sussex and Berks I know of fine plants, some of which have been planted for some years; and there are several plants here which bear thousands of blooms in a season and look in better health

surrounding soil, this will be found to suffice at the time of planting, because in subsequent years the soil can be opened and some of a fresh and sweet nature added. The soil should, however, be made very firm by ramming with a wooden instrument, and strong stakes to prevent swaying by the wind should be provided.

There are a good many varieties that do really well in the open, and many persons know how well the foliage looks among other more common kinds of shrubs. *C. Donckelaari*, spotted and with fine yellow stamens, is a wonderful free-flowering variety, and seeds with us on walls and in the open. *C. reticulata* is the queen of Camellias, with very large flowers of rich pink and sometimes 8 inches or 9 inches across the bloom. The foliage is also quite distinct from that of all other Camellias. It flowers somewhat later than the majority. *C. fimbriata alba*, *C. imbricata*, Maiden's Blush, *C. latifolia*, *C. anemonæflora*, *C. japonica*, *C. alba plena*, *C. Grysii*, *C. Kelvingtonii*, *C. Sieboldii* and *C. Lady Clare* are also good. Camellias when growing require plenty of water and stimulants. Good liquid



FLOWERS OF A LITTLE-KNOWN GREENHOUSE TREE, DOMBEYA MASTERSII.

than many to be seen under glass. It is necessary, of course, to plant them in a somewhat sheltered position, and that sheltered position can, as a rule, be found; if not, a shelter can invariably be made by using some well-known hardy plants of good dimensions for the purpose. I believe that one Camellia here, which is about seventy feet in circumference, has been planted nearly fifty years, so that it has borne the brunt of a good many storms, and is as fine a plant as could be seen in the country. It has the shelter of the mansion on one side only. This alone should stir hardy plant lovers to try them.

They need good sweet soil of fair depth, and it should always be thoroughly trenched previous to planting. A great deal of peat is often thought necessary, but this is a fatal mistake, as if once it is allowed to get dry much injury may be looked for. If a third each of peat and leaf-soil, with a little manure, be added to the

cow-manure is one of the best, and at intervals a good watering from the soot-tub is beneficial, as also is a good dusting of soot and bone-meal worked into the soil as a top-dressing. Large plants require top-dressing annually, and this in no half-hearted manner. When plants have become ragged, perhaps through stress of circumstances or bad health, they should be taken up and shaken out; that is, get all the old soil away that is possible and replant in new sweet soil and on a well-drained spot. Cut all the branches hard in, and then during April, May and June—in fact, all the dry months—spray the hard wood two or three times daily. Later you will find numerous little growths appearing, and in a short space of time a nice new, well-shaped plant can be made.

Seedlings should be grown on liberal terms, when they will make very satisfactory plants in a few years. Copious supplies of water and liquid manure should be given all through the growing season.

The flowering season commences with *C. Sasanqua* and finishes with *C. reticulata*.

Leonardslee Gardens, Horsham. W. A. Cook.

HYDRANGEA PANICULATA.

A GLANCE at the illustration on page 5 will at once show what an admirable subject *Hydrangea paniculata* is when grown in a large, spacious bed. This widely-grown shrub is met with under varying conditions; sometimes it is grown in pots or tubs for the embellishment of the conservatory,

from 6 inches to 9 inches, or sometimes more, in length and 6 inches wide, and they are made up of large flowers with yellow petals and crimson stamens, which form a wonderfully showy combination. The leaves of the species are also pretty, for they are bipinnate, up to 9 inches long, and composed of numerous tiny leaflets. The Kew plant is about 25 feet high, and is planted in loamy soil, the wall to which it is attached having a west aspect. For the Southern Counties it is a plant which might be used for a high wall more frequently than it is at present, for few leguminous

Evergreen, Turkey and American Scarlet, as well as the English, may be planted. Few trees cast denser shadows than the Chestnuts. The double white and the scarlet-flowered are lovely, and, where space is ample, one or two Horse Chestnuts may be planted. The Chestnuts are clean trees; that is, they cast their leaves quickly, also their fruits, and during the summer-time rarely shed anything after the flower-husks have fallen.

Groups of the common Lilac and Mock Orange are ornamental and serviceable. In many instances it is possible to plant *Ampelopsis* and *Ivies* and train the branches to wires or rough stakes, and so form a friendly shelter from the scorching sun's rays in summer-time. In many gardens in the suburbs of London, and notably in and around Romford, I recently saw many such shelters created in this way and by utilising trellises. Great care must be taken when lifting and replanting, and if dry it is advisable to water occasionally after the planting is finished. Stake securely and take every care of leading shoots.

B.

THE FRUIT GARDEN.

NEW RASPBERRY PLANTATIONS.

IT is really astonishing that cultivators will bestow much labour and attention on old, worthless plants year after year without attempting to renew them. It does not cost more nor entail more labour to attend to strong, fruitful plants than to weakly ones. Indeed, the latter cause the most trouble and expense without any adequate return. If possible, the new plantation should be made on fresh soil, that in which Raspberries, Currants and Gooseberries have not previously been grown for some years. Sometimes cultivators take up young canes from old plantations. This may and should be done in preference to continuing the old plantation; but the best policy is to buy young stock from a nurseryman. Although these plants are surface-rooting to a great extent, it is quite necessary to trench, or at least very deeply dig, the soil. Canes of medium strength are the best to plant, as they are usually well ripened. Very strong canes may look tempting to the inexperienced cultivator, but they are generally pithy and immature.

I prefer to grow Raspberries in rows 5 feet apart, each cane being 6 inches asunder; then every one will get sufficient light and air to ensure the proper ripening of the wood even in cool summers. If planted in clumps, the latter should be 4 feet apart each way and confined to three canes in each clump. The roots are very fibrous, so planting must be done while the soil is comparatively dry; then it can be well worked in among them. Only lightly tread down the soil at the time. In any case the canes must be cut down to half their length at planting-time, and they may with advantage be cut still lower. If the canes are planted in rows, strong posts and wires should be fixed at the time, so as not to disturb the roots afterwards. If grown in clumps, one stout stake will be sufficient for each, but the canes ought not to be tied too closely to them. If the stakes and posts are tall enough, they will also serve the purpose of supporting nets when the fruit is ripening. Immediately the planting is finished, a surface mulch of littery manure must be put on.

AVON,



A FLOWERING SPRAY OF *CÆSALPINIA GILLIESII*, A LITTLE-KNOWN HARDY SHRUB.

and it renders a good account of itself as a solitary specimen when allowed to grow almost unchecked in a sheltered spot. Although not fastidious in regard to soil, yet it prefers one that is rich and loamy, and if plenty of decayed cow-manure can be given as a top-dressing in the growing season, so much the better. Failure in *Hydrangea* culture, whether in pots or in the open, is often due to poverty of the soil, unripened wood and insufficient moisture. When grown outdoors the plants are at their best during September. In order to keep these plants dwarf and within bounds, it is necessary to prune rather severely before growth commences.

CÆSALPINIA GILLIESII.

VERY few woody plants from South America are suitable for outdoor culture in the neighbourhood of London, yet this showy subject may be grown quite well against a wall. For many years past it has been a noticeable specimen on the front of the Museum, near the Palm House, at Kew, and during the last few years a few inflorescences have appeared in September. Last year it was more conspicuous than ever, for, owing, no doubt, to the sunny summer, flower-heads appeared from the point of almost every branch. The inflorescences are, when mature,

species which may be grown out of doors are of such an interesting character.

D.

SHRUBS AND TREES FOR SHADE.

DURING the past summer, shade in the garden has been more appreciated than for many years. The shelter of a single tree or branching shrub has been eagerly sought; and as there are not many trees or shrubs in villa gardens which can be made good use of by the owners during very hot weather, I will name a few kinds that may be planted at this season. Where the maximum amount of light and air is required in the winter-time, deciduous specimens may be planted; then their leafless branches will not materially obstruct the light. Indeed, some kinds of deciduous trees are much more effective in summer than are the evergreens. How very beautiful a single specimen of a Weeping Ash, Birch, or Beech is when planted in the right position! There is not much labour or skill necessary in the training, seats can be arranged under the pendulous branches, and even in winter-time the tree is highly ornamental and never obstructive or unsightly. The Laburnum, Guelder Rose and Mountain Ash form a trio suitable for any pleasure ground. Then, for larger gardens, the white and scarlet Hawthorns, and Oaks,

CHRYSANTHEMUMS.**JANUARY NOTES.**

DURING this month the exhibitor will be anxious to get all cuttings put in that are to produce first-crown buds, mainly on unstopped plants. The cuttings inserted now will form roots more quickly than those put in during the early days of December, and consequently there will not be much danger from weakening through being in the propagating-frame too long.

Rooted Cuttings.—Those cuttings first inserted must now be frequently examined, and taken out of the propagating-frame as soon as sufficiently rooted. They should be transferred to a cool frame, and there gradually inured to more air, and be kept well up to the roof glass so as to have all the light possible. Very careful watering will be necessary all the time, as if the soil gets very sodden, the cuttings, however many roots they may possess, will be badly checked, and if there are only a few roots the young plants may die. Maintain the soil in an even state of moisture, and before it becomes very dry give water; in this way the soil is kept sweet. Frequently a nice light spray from the syringe will do more good than the watering of the soil, unless, as above stated, the latter is getting quite dry. On no account, however, must the leaves be syringed after midday at this season.

Soil for Potting.—This should always be prepared in good time; if the ingredients are mixed a few weeks in advance of the time they are required for use, the whole will be in the best possible condition. Fibrous loam two parts, sweet leaf-soil one part, and rotted manure and coarse sand one part will form a suitable general compost. No artificial manures must be used at this potting. One crock will be sufficient to place in each pot, and on it a small quantity of the fibrous part of the compost and some half-rotted leaf-soil should be put. When this is done, the roots ramble freely round the bottom of the pot, and good, thick leaves result. The cuttings of single-flowered varieties and those of the incurved section must be put in during this month, in a similar way to that advised in December for Japanese sorts.

Varieties for a Beginner to Grow.—The following is a select list and the number of plants for a beginner in Chrysanthemum culture to grow: Mrs. A. T. Miller, three, white; White Queen, two, white; Reginald Vallis, two, purple; Frances Jolliffe, three, yellow, striped rose; Master James, three, chestnut, gold reverse; Bessie Godfrey, two, canary yellow; Rose Pockett, two, old gold and salmon; Evangeline, two, white; Mrs. W. Knox, three, yellow, suffused bronze; Mary Poulton, two, pink; Mrs. L. Thorn, three, yellow; Master David, two, crimson, gold reverse; Kara Dow, two, gold and bronze; Countess of Granard, two, yellow and bronze; Lady Edward Letchworth, two, yellow; Mrs. R. Luxford, two, Indian red, gold reverse; Laura Hill, two, terra-cotta; Edith Smith, three, white; Mrs. Charles Penford, two, yellow; and Pockett's Crimson, two, crimson.

Incurved—Clara Wells, two, cream and bronze; C. H. Curtis, three, yellow; Buttercup, two, yellow; Embleme Poitevine, two, light yellow; Lady Isabel, two, blush; Romance, three, yellow; Mrs. Barnard Hankey, two, bronze; Mrs. G. Denyer, three, pink; Pantia Ralli, two, buff; W. Biddle, two, yellow and bronze; Edwin Thorp, three, white; and Ialene, two, rosy violet. Singles—Edith Pagram, two, pink; Mensa, three, white; Mary Richardson, three, salmon; Metta, two, magenta; Sylvia Slade, two, rose; White E. Pagram, three; and Altrincham Yellow, two. AVON.

ROCK AND WATER GARDEN.**HARDY CYCLAMEN AND THEIR CULTURE.**

IN almost every garden there are positions not suited to the requirements of any other race of plants, but in which hardy Cyclamen would thrive. For instance, they are never happier than when growing beneath the overhanging branches of a big tree or in a shady corner in the rock garden, where perhaps only Ferns will consent to grow, and they well repay any little extra attention by producing their beautiful little blooms during a period of the year when there is a scarcity of flowers, sometimes

planted, and during the dull days of the year prove a great attraction, the russet brown fronds providing a charming setting for the beautiful and quaint little blossoms.

Cyclamen are best propagated by means of seed, which may be collected in plenty from the plants, and should be sown as soon as ripe in pans of light soil and placed in a cold frame. The seedlings will appear within six weeks, and when large enough should be potted singly into small pots, and they will then soon make nice plants large enough to be planted in their permanent positions. The following are the best-known and more desirable varieties:

C. Coum.—A beautiful little species sometimes in flower by Christmas, and if only for this reason is worthy of a place in every garden. It has small, round, dark green leaves of a leathery texture, which form a nice contrast to the red blooms.

C. europaeum.—Variable in colour, but more often dull red, this variety extends its flowering season from July to November. The flowers are larger than in most species and more nearly resemble those of *C. persicum*, while the leaves are prettily marbled with grey and white.

C. hederaceum.—A beautiful variety, the leaves of which are not the least delightful feature of the plant, these being large and shaped like the Ivy, as the name indicates, while they are marbled in a most beautiful manner with shades of grey and light green, and form a very pretty feature of the



A FINE BED OF HYDRANGEA PANICULATA. (See page 4.)

flowering before the Snowdrop. Cyclamen thrive best when planted in a mixture of loam and leaf-soil, to which may be added a portion of decayed vegetable matter, and an annual surface dressing of leaf-soil or decayed manure may contribute to their welfare. Unlike the Persian Cyclamen, the bulbs should be covered when planting and be given a position where they may remain undisturbed for years, for this is a great factor in their successful cultivation. At Kew many of these dainty little Cyclamen are grown on the mound near the Palm House, where hardy Ferns are also

rock garden during the dark portion of the year. The flowers appear in September and October and are light red in colour; but there are some very pretty pink and white forms of the species that are well worth cultivating.

C. vernum.—This somewhat resembles *C. Coum* and flowers at about the same period of the year. The leaves are small, round, and dark green in colour on the upper surface, but often of a dull red beneath. There is a pretty white form of this variety.

RALPH E. ARNOLD.

The Gardens, Cirencester House, Cirencester.

THE ROSE GARDEN.

THE YELLOW SCOTCH ROSE.

THIS little gem is rarely seen except in old gardens. Why, I do not know, for it is a flower of grace and beauty both in form and colouring. Flowering as it does in May, even before the Austrian Briars, the Yellow Scotch Rose is always welcome, heralding, as it were, the coming of Queen Rosa. Perhaps the nearest in form is the Austrian Briar Harrisonii, but it is perfectly distinct, as may be seen by its formidable prickles. The Yellow Scotch Rose has flowers of a rich sulphur yellow, and it is very bright when developed into a big bush or grown as a hedge plant. It is readily propagated by the numerous underground suckers, which come up all around, thus differing from the

comparatively dwarf habit, and the variety under notice is also of low stature. The plants in question scarcely exceed 2 feet in height, yet their fruits are larger than those of many tall-growing species. The fruits are from 1 inch to 1½ inches long, and about one-third of an inch wide in the widest part. They narrow rather rapidly towards the apex, and are terminated by long calyx lobes. During early summer it is also a conspicuous object, for at that time its pretty deep pink flowers are very attractive. Both *R. alpina* and the variety under notice are suitable plants for the rock garden as well as for the open border, and garden-lovers would do well to give them a trial. D.

DUAL VARIETIES OF ROSES AS PILLARS.

It is a common complaint in regard to our early summer-flowering rambler Roses that they leave

many of our strong-growing Roses as dwarfs. I refer to such sorts as Hugh Dickson, J. B. Clark, Mrs. Stewart Clark and Johanna Sebus. Just plant them as pillars, alone, or with, say, Carmine Pillar, Una, Flora, Electra and other early sorts, and they would not fail to give us some delightful effects. I need not give details of various blendings, for they will suggest themselves to anyone who will take the trouble to study the growth of the various kinds.

There is another phase of this subject, and that is training the fast growers around three poles formed as a tripod. We may still plant two sorts together, such as White Dorothy and the old Crimson Monthly, and there would be in a couple of years a lovely pillar of scarlet and white bloom for autumn effect. Now that climbing and rambler Roses are multiplying so rapidly, this dual planting would solve the difficulty some of us encounter as to how to dispose of all the beautiful sorts now available. In preparing holes for these Roses, let them be fully 2 feet 6 inches deep and 3 feet square. This would be sufficient for the two varieties.

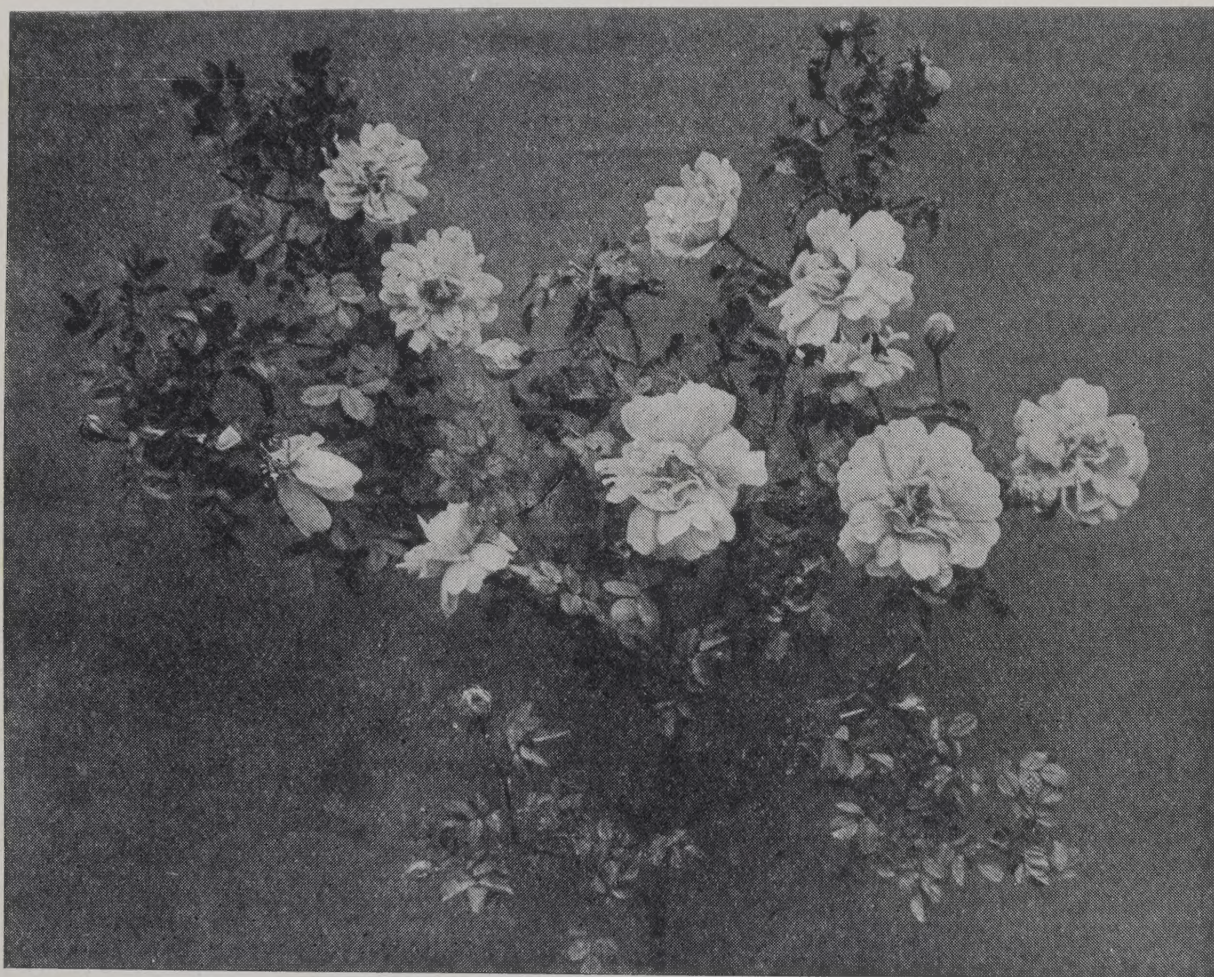
ROSE SOLEIL D'ANGERS.

THIS marvellous sport of Soleil d'Or bids fair to become very popular on account of its unique colouring. It bears a great resemblance to Juliet, although perfectly distinct, and is not so refined a flower. But the back of the petals, which are of old gold, are almost identical to that popular variety. The inner petals are a rich mulberry crimson, whereas those of Juliet are a lovely rosy carmine. The shape of the flower of Soleil d'Angers is quite confused, more after the style of Soleil d'Or. Then we have another lovely gem in Beauté de Lyon, one of M. Pernet-Ducher's latest. All three Roses named have the growth, habit and fragrant foliage of Soleil d'Or. Beauté de Lyon has a most unique colour which is difficult to describe. Perhaps coral red, shaded orange yellow, is sufficient to give readers an idea of its lovely shade. With me the flowers come rather small; but then I must admit the plant has not become established yet, and the flowers are certainly not representative of the variety. Hybridisers should obtain this Rose, for it yields pollen freely; so also does Soleil d'Angers. If the plants are somewhat ill-shaped, they amply atone for this by their beautiful colouring and in most cases delicious fragrance, and they will be grand additions to the Briar garden that will be a feature of every rosery in the near future.

ROSE GEORGE C. WAUD.

FEW of the newer Roses stood the test of last season better than the above-named variety. It is without doubt one of the best productions of the eminent raisers, Messrs. A. Dickson and Sons, Newtownards. Its colour is one that positively dazzles the eye, and no wonder that there was quite a clamour for it early in the season. Rosarians are getting a little tired of the very many semi-double Roses put on the market, and the last remarkable summer tested them most unmercifully; but in George C. Waud we have a flower that will endure, and its glowing orange carmine seems to revel in the bright sunshine. It is a good grower, abundant bloomer, and suitable both for the garden and the show-box, and also for pot culture.

One is glad to see raisers producing Roses with good rich colours—I mean sorts such as George C. Waud, George Dickson, Edward Mawley and Leslie Holland; for although the creams and orange shades are most delightful, they rather outnumber the dark-coloured novelties.



FLOWERING BRANCH OF THE YELLOW SCOTCH ROSE.

Austrian Briars, which do not seem to possess this tendency. All the Scotch Roses are worthy of a place in our gardens, and they are more readily procurable from the Scotch nurserymen, although some English firms grow them. They make admirable hedges 3 feet to 4 feet high, and provide a perfect thicket of growth. Although they seed freely, they seem difficult to hybridise. I have made several attempts, but could never induce one to seed. When artificially fertilised, a hedge of the Yellow Scotch, with the perpetual-flowering Scotch Stanwell Perpetual interspersed alternately, would be a beautiful feature. P.

ROSA ALPINA PYRENAICA.

THIS Rose was very showy late last autumn in the border which contains the collection of species of Rosa near the Pagoda at Kew, for it was bearing a large number of coral red fruits, which stood out conspicuously among the fruits of many other kinds near by. *R. alpina* is a European species of

a great void when their flowering season has terminated, and unless judicious care is exercised when disposing the Roses upon arches, pergolas or pillars, the positions they occupy will be most uninteresting at a time of year when all should be contributing their part to the general effect of the Rose garden. Now this may to some extent be obviated by planting a perpetual-flowering sort with the early one. There is no objection to this arrangement from a cultural point of view, because we can easily provide both plants with sufficient root space, and it will only mean preparing two good holes for their reception instead of one. There are numbers of Roses grown nowadays that are so well suited for growing in pillar form which are also perpetual-flowering, and would blend beautifully with the more rampant early bloomers. I have seen that delightful Rose Bardou Job mingling its massive, almost single, flowers of such wondrous rich colouring with early summer varieties, such as Aglaia. Speaking of pillar Roses, I think we lose much by treating

COLOURED PLATE.

PLATE 1442.

BORDERS OF ANNUAL FLOWERS.

ALTHOUGH much has been done during recent years to bring the value of hardy and half-hardy annual flowers before the public, there are many otherwise good gardens where only a very few kinds are grown. The reason for this is by no means plain. For creating a brilliant and beautiful display of blossom during the summer months at a comparatively low cost, there is nothing to compare with our best annuals, and the accompanying coloured plate proves beyond a doubt that they may be successfully utilised for furnishing mixed borders. But it is, above all else, most essential that good strains of whatever kinds are used be selected; much of the bad or indifferent reputation that has hindered the cultivation of annuals in the past has been due to the fact that cheap, unreliable strains have been purchased. The coloured plate presented with this issue represents a charming scene in the gardens of Lord Northcliffe at Sutton Place, Guildford. The whole of the annuals and biennials seen were raised from seeds supplied by Messrs. Sutton and Sons of Reading, and it is due to their courtesy that we are enabled to reproduce the plate in colours. The colour-photograph from which the plate has been prepared was taken by Messrs. Sutton and Sons' own photographer during the past summer.

Mr. J. Goatley, the head-gardener at Sutton Place, has been kind enough to furnish the following particulars about the borders that may be seen on either side of the pathway:

"The border illustrated on the left-hand side of the pathway has for the past five years, with one exception, namely, 1909, served as a mixed annual border. In 1909 it was planted with Sweet Peas in clumps. The following year it was dug over in autumn and again in spring (no manure added), and sown with annuals in April, these making a fine display during the summer of 1910. Last year it was dug two spits deep and dressed with lime, and later was given a dressing of soot. It was well worked about in March, and after making it firm by repeated treadings was sown about the second week in April.

The seed was sown in shallow drills in irregular spaces (marked out beforehand), and the following varieties of annuals were employed: For the background—Tall Larkspurs, Sutton's Stock-flowered Rosy Scarlet and Blue; Lavateras rosea splendens and alba splendens; annual Lupines, *L. hybridus atrococcineus*, Tall Dark Blue, yellow *Menziesii* and *mutabilis*; Clarkias Double Salmon, Carnation Flaked Pink and Firefly, annual Chrysanthemums Morning Star and Eastern Star.

Centre and foreground.—Godetias Double Rose, Duchess of Albany and Lady Albemarle; *Linum grandiflorum rubrum*, dwarf Larkspurs and Sweet Sultan, Candytufts Sutton's Improved White Spiral and Carmine; Mignonette Sutton's Giant, *Nigella Miss Jekyll*, *Phacelia campanularia*, *Collinsia bicolor*, *Limnanthes Douglasii*, *Convolvulus minor* Blue (dark) and Sky Blue, *Eschscholtzia crocea* and Mandarin, *Gypsophila elegans* and *Dimorphotheca aurantiaca*. These were arranged so that the colours harmonised, and a natural effect was obtained by placing some of the taller varieties near the foreground, and *vice versa*.

The seedlings were thinned very early, and two other thinnings were made at intervals. Each plant was given ample room for development, the dwarf kinds being allowed a space varying from 6 inches to 1 foot, and the larger varieties from 1 foot to 18 inches. Where necessary, each plant was staked with small Hazel sticks, the ground was frequently hoed with the Dutch hoe, and the plants kept regularly watered in the evenings. The border measures 114 feet in length, and is 9 feet wide.

The border on the right side of the pathway is devoted chiefly to herbaceous Pæonies, of which we have a very good collection. They have been planted therein for the past four years. We generally get three crops of flowers from this border. First we have Narcissus in several good varieties, such as Sir Watkin, Golden Spur, Emperor, Empress and Horsfieldii. These make a good show when associated with the richly-coloured growths of the Pæonies, which in due time provide us with the second crop of bloom. Before these cease flowering we commence preparations for the third crop of flowers. This border is of exactly the same dimensions as the one opposite.

The Antirrhinums grown here are Sutton's Cloth of Gold, Tall and Intermediate, and Pure White. These are sown in heat in January, grown on, and planted out when ready. *Coreopsis grandiflora* is sown in March and treated the same as Antirrhinums. Practically all the remainder are annuals, half-hardy and otherwise, and are mostly sown in frames in March on hot-beds, pricked off when very small, and planted out in April and May. The varieties we use for this border are as follows: *Arctotis grandis*, Asters White Ray and *sinensis*, Clarkias grown on in pots and planted out, *Coreopsis coronata*, Cosmos Miniature Yellow, Godetia sown on border, *Nemesias* Tall and Dwarf, Phlox Drummondii Salmon Rose, Yellow, and White; *Salvia* Bluebeard, *Statice sinuata hybrida* and Suworowii, *Salpiglossis* Blue and Gold, Golden Yellow and Crimson Gold-veined; Sunflower Dwarf Miniature, Stocks Beauty of Nice, Mauve and White, and Mauve Beauty; and *Tagetes pumilum*.

These are arranged with a view to colour and general effect, and are planted far enough apart to allow of full development, staked where necessary, and treated subsequently the same as those on the opposite border. No manure has been given for the best part of two years, but lime has been added each year."

THE FLOWER GARDEN.

SWEET PEA NOTES.

GREETING. — Throughout the year that is just commencing it is to be my honour and pleasure to talk to the readers of THE GARDEN about Sweet Peas, and it will be my endeavour to give information on cultural matters which will be obviously of more value to the comparative novice than to the experienced grower, while still being of interest to the latter. Suggestions will be made anent varieties of merit; but unless special requests are directed to the Editor, no attempt will be made to compile definite lists, as this is a task that should be undertaken by each grower, who can consult his own tastes in the directions of colour and form. Allusion to the doings of the National

Sweet Pea Society may be made from time to time as opportunity or necessity arises, and I am hopeful that when the year 1912 has run its course my readers and myself will have become excellent, even though very distant, friends. All may turn to me in cases of doubt and difficulty, since the Editor is good enough to say that space is always at my disposal to reply to correspondents. With these few words I wish my readers a happy New Year and a prosperous one in their businesses and their hobbies, whatever these may be, but especially to those who acknowledge allegiance to the Queen of Annuals, the Sweet Pea.

Retrospective.—I can look back intimately to that great event at the Crystal Palace when a few ardent spirits joined forces to celebrate the bi-centenary of the introduction of the flower into this country. The establishment of the National Sweet Pea Society which followed so closely upon that event is green in my memory, and I am proud that an organisation in whose early formation I was so strenuously connected has succeeded in a manner of which none of us pioneers dreamed.

Introspective.—Is all well with the society now? It is an important question, and it is clear that time alone can answer it fully. The doings of its floral committee have been keenly discussed and criticised, and the ulterior motive has been to ensure the maintenance of success. Whatever may be right or wrong in the management of the society is not for me to decide, but that it has reached a critical period in its history none, I dare venture to assert, will dispute. It is just on the over-weighted side in its financial responsibilities, and the concerted friendly efforts of all its members, as well as its committees, alone will keep it floating satisfactorily.

Prospective.—But let me say at once that I look forward with every confidence. The policy of the committee has always been to spend money to get more money, and in all the years that have gone it has been successful. I know that it is a fallacy to say that what has been must be again, but with the same happy association of the same excellent workers one is entitled to look for even greater success, since experience should have made the powers that be more capable, and perhaps more willing, to grapple with a strong heart anything that may arise. Unanimous loyalty to the committee which the members themselves elect will ensure success, and it should be the endeavour of everyone connected with the society to bring in at least one new member during the ensuing year; more if possible, of course, but at least one, as augmented membership spells augmented funds and augmented funds, give added power for good.

HORACE J. WRIGHT.

THE BEST PLANTS FOR A BLUE GARDEN.

IN these days of specialising, and when the study of colour and effect counts for so much, it is sometimes of help, in view of the beautiful new plants so carefully imported and launched on the market, to consider how a certain effect can be arrived at; and few more charming arrangements of colours can be evolved than a blue border with a little mauve mingled in it.

I think most gardeners endeavour to lay a solid foundation of bulbs and perennials; but for a really good show of flowers it is quite essential to have

annuals, and a good many of them. At the very commencement of spring our border begins with masses of Scillas, pretty clumps of the blue mauve Crocus and Hepaticas, and Chionodoxa Lucilæ (Glory of the Snow), C. sardensis and others of this genus. The Iris family give us charming early-flowering varieties, such as reticulata and alata. A mass of Muscari botryoides will make the ground quite blue early in the spring before our own Bluebells appear on the scene, but these, of course, are more suited to the wild garden. Of Hyacinths the most beautiful blues exist. The Pulmonaria will help to clothe the ground in front of the border; but it is a little difficult to bridge the period when all the spring bulbs are over and before the early summer flowers come to help us out.

Myosotis is a stand-by, and Omphalodes verna, backed by grey Lavender bushes, will help us over the worst. Then comes such a riot of bloom from the kingly Delphinium to the lowly Veronica prostrata that the largest space is filled and runs over. Next in height to the Delphiniums come the lovely Anchusas, all these flowers the bluest of blue. Gentiana verna and G. acaulis, though preferring a rock garden, are treasures of colour, and so is the Lobelia.

Nigella damascena (the Miss Jekyll variety) is a great favourite of mine, and the delicate-looking Nemophilas are beautiful though transitory joys. For the rock garden, a little earlier, Wilson's Blue Primrose is charming, and the Vincas minor and plena are also delightful for the rockery. The blue Larkspurs are very decorative, and Commelina cœlestis is a pretty thing; all these are real blue.

Directly we touch the Iris family we get to tones of mauve and pastel blue. I mix them freely myself, and also the lovely shades of Lavender which one gets by using that plant, the charming Eryngiums or Sea Hollies, and the lovely Phlox canadensis Perry's variety. For a climber Lady Northcliffe is a lovely mauve Clematis, and so is Lady Caroline Bovill.

In autumn the dark blue mauve Aster makes a great show, also the pale mauve which Frau Fisher of Hom-burg sends me as Hellblaue. There are now a splendid dark and a pale mauve Verbena, which, with Heliotrope, make a charming *mélange*. Of course, the very bluest flower for late summer is Salvia patens, and the great Agapanthus is splendid; but I contend that it is better to have the borders well garnished than to stick too severely to true blue, so I welcome the purple Viola cornuta. The Emperor William Pansy and Lord Beaconsfield are, perhaps, a little bluer. I love Salvia Bluebeard, which in a cool year grows like a Nettle. Last year it was simply scorched out of the border.

The Campanula family is a large one, but the blues are not, as a rule, azure, save the darling

Harebell, and even that is only bluish. The Michaelmas Daisies are a host of lovely mauves. I particularly like Aster Amellus and A. acris. I have overlooked Lithospermum prostratum, which is very blue and makes a delightful carpet quite late. The Gladioli to be recommended are Baron Joseph von Hulot (very late), Kelway's Purple, Persimmon, and I am told Kelway's Mike Lamburn is good. I must not forget the blue Larkspurs and Aquilegia cœrulea. I append a list of all the blue and mauve and purple flowers I can remember, in the hope that they may be of use to my friends, should they care to embark on a blue corner, and only hope it may be of service: Anemone coronaria, Aconitum, Ajuga metallica

Kelway's Purple, and Baron Joseph von Hulot; Heliotrope, Haberlea Heldreichii, Hepaticas angulosa and apennina, Hyacinths Grand Maitre, Bloksburg, King of the Blues, Leopold II., Queen of the Blues, Charles Dickens and Rembrandt; Irises reticulata, alata, Xiphium, Marie, germanica, English Purple, and many others; Lavandulas spicata and alpinus, Larkspurs, Lithospermum prostratum, Lobelias single and double, Lindelofia spectabilis, Lupinus Foxii, Muscaris comosum and botryoides, Mazus Pumilio, Myosotises dissitiflora and alpestris; Morisia cœrulea, Nepeta Mussinii, Nemophila, Nigellas damascena, and purpurata (Miss Jekyll); Omphalodes verna, Pansies Blue Beard, Diamond, Emperor William and Lord

Beaconsfield; Polemonium humile, Parochetus communis, Pasque-flower (Anemone Pulsatilla), Pentstemons Royal Mantle, Mrs. Kelway and heterophyllus; Phloxes divaricata, canadensis and Lapham's variety; Polemoniums cœrulea, grandiflora and himalaicum; Primulas cœrulea and Wilson's strain, Pulmonaria, Phacelia grandiflora, Salpiglossis New Emperor, Salvias patens and Blue Beard, Scabiosas caucasiana and japonica, Scilla bifolia, Statice latifolia, Tecophylæa cyanocrocus, Tradescantia cœrulea, Veronicas dentata, amethystinus, rupestris and prostrata; Vinca minor, Violets cucullata, Princess of Wales and Czar; and Verbenas. For a wall: Ceanothus Veitchii (May), Gloire de Versailles (August) and rigidus; Clematises Jackmanii, Lady Northcliffe and Lady Caroline Bovill; Ipomœa, blue (not hardy); and Plumbago (can be plunged in summer). Hardy or nearly hardy kinds: Aster violacea alpinus cœruleus, Adenophora polymorpha stricta, Galatella hyssopifolia, Primula pulverulenta, Myosotis Ruth Fucher, Phlox divaricata subulata lilacina, Platycodon grandiflorum, Salvia azurea grandiflora, Phyteuma orbiculare and Violets Berthe Barron, Liane and California.

VERE GALWAY.

Serlby Hall, Bawtry, Yorks.



A VIEW IN THE GARDEN OF ANNUAL FLOWERS AT GUNNERSBURY HOUSE, ACTON.

crispa, Anchusa Dropmore variety, Aquilegia cœrulea, Asperula azurea, Asters acris and Amellus, and many others; Agapanthus umbellatus, Anemones apennina and blanda, Aristeia Ecklonis, Brodiaea, Campanulas carpatica, persicifolia, azureus, glomerata, turbinata, muralis and grandiflora; Centaurea montana, Commelina cœlestis, Ceratostigma plumbaginoides, Clematises tuberosa, davidiana, integrifolia, Lady Northcliffe and Lady Caroline Bovill; Crocuses, blue in spring and C. speciosum in autumn; Chionodoxas sardensis and Lucilæ, Camassia esculenta, double Tulip Blue Flag, Delphiniums in variety, Echinops humilis, Eutoca viscida, Erinus, Eryngiums azureus, dichotomum and maritimum; Funkia lancifolia, Gentianas acaulis, verna and bavarica; Gladioli Persimmon,

the space of this article; therefore I propose to deal with hardy annuals, embracing such as can be brought forward in a cold frame only. These types of annuals, it may be noted, but they are not often so alluded to, are lovers of a calcareous soil, thriving better in such than in a soil rich in humus. With a little consideration this may be noted, for most of the readers of THE GARDEN will have observed how well annuals thrive in many seaside resorts where lime is in evidence in the soil. In their native habitats this also applies in many instances. Annuals of this description will also grow freely and flower most profusely in somewhat limited borders. This, I think, all goes to prove that cultivators often err in providing too rich soil for their growth.

THE CULTIVATION OF HARDY ANNUALS.

ANNUALS, in a comprehensive sense, cannot be dealt with in the space of this article; therefore I propose to deal with hardy annuals, embracing such as can be brought forward in a cold frame only. These types of annuals, it may be noted, but they are not often so alluded to, are lovers of a calcareous soil, thriving better in such than in a soil rich in humus. With a little consideration this may be noted, for most of the readers of THE GARDEN will have observed how well annuals thrive in many seaside resorts where lime is in evidence in the soil. In their native habitats this also applies in many instances. Annuals of this description will also grow freely and flower most profusely in somewhat limited borders. This, I think, all goes to prove that cultivators often err in providing too rich soil for their growth.

During the past season I noted that annuals thrived remarkably well and were quite in contrast to what many of them were in the previous two or three dripping seasons. There are exceptions to almost every rule, and as an instance I would quote that lovely climbing annual, *Mina lobata*, which in the past season grew too freely and was not so effective as usual. A few annuals thrive well in quite moist situations, *e.g.*, *Polygonum orientale*, the Persicaire of the French growers; this and a few more may be classed as semi-aquatics. Taken as a whole, it may be stated that hardy annuals revel in abundance of sunshine. My first acquaintance with the *Cosmos*, as a case in point, was upon the top of a low wall at Cadenabbia, on the banks of the Lake of Como. After seeing them there I grew some the following season, but I failed to profit as much as I should have done, having been too generous as it pertained to the soil.

In the cultivation of nearly all hardy annuals that are sown where they are to remain, it is a common mistake, first, to sow too thickly, and afterwards to leave the seedling plants too close together. The result of this is an impoverished plant, and its life is consequently quite fugitive in character. As a case in point, we see mistakes made in many gardens where the popular *Matthiola bicornis*, the Night-scented Stock, is grown. Again, in the case of the now universally popular Sweet Pea, this is oftentimes sown much too thickly, and here, again, comes in another mistake, *viz.*, the leaving of the seed-pods to develop, which soon exhausts the plants. We should aim at securing as long a life as possible for all annuals, and if this important item of cultivation was borne in mind more often than it is, we should see a much finer display.

Hardy annuals should enter into the floral arrangements of our gardens more than they oftentimes do. This might be advantageously done where the amount of glass at command is all too limited. I well remember having seen the wisdom exercised in using these plants in a large public garden in the North of England on one occasion. I thought at the time that this was a good example of how to make the best of things at one's command.

There is a disposition that prevails in some gardens of occupying too much space with bedding plants during the winter months, when the room would be much better utilised with decorative flowering plants in pots and labour saved.

As a class of plants it cannot be said that hardy annuals are of difficult cultivation, if a due proportion of common-sense be exercised in their treatment. Most growers, I have no doubt, will have noted how well an adventitious seedling will thrive where it has had plenty of room to develop. How well these look, too! A casual plant of the *Nicotiana affinis* hybrids will at times thrust itself upon our notice and thrive well. We have now several annuals that serve a useful purpose as foliage plants. *Kochia trichophylla* is an instance of this. As regards this plant, it may be noted that a mistake is often made of sowing the seed and coddling the plants in pots afterwards until they are planted out. The Giant Hemp makes a fine display as a foliage plant for

the backs of borders. From the standpoint of fragrance alone, hardy annuals occupy a prominent position, as in the case of the *Mignonette*, the *Stock*, the *Sweet Alyssum*, the *Candytuft*, the annual *Datura*, the *Sweet Scabious* and, of course, the *Sweet Pea*.

From among hardy annuals (or those that can be raised in cold frames) we draw a large number of our everlasting flowers, such as the *Rhodanthe*, the *Helichrysum*, the *Acroclinium* and the annual forms of the *Statice*. Some of the prettiest of the ornamental Grasses are also annuals; these are excellent to use with the everlasting flowers just noted. *Briza minima*, *B. maxima*, *Lagurus ovatus*, *Eragrostis elegans*, *Agrostis nebulosa* and *A. pulchella* are all beautiful, and they also last well. Where a position can be allotted to hardy annuals alone, they make a most attractive feature, and well repay any extra trouble that may be given them. There is such a diversity in form, in habit and in growth. We have climbing annuals, bush-like annuals, prostrate annuals,

THE VALUE OF SNOWDROPS IN EARLY SPRING.

WITH the earliest days of the New Year we think of the Snowdrop, even though it has not yet reared its head far above Mother Earth. It is "the early herald of the infant year," and is the bearer of the glad message that the springtime is at hand, and that in due course we shall be in the midst of the delights of the flowers of that season.

Yet it must always be welcomed for its own intrinsic grace and beauty. Its virgin purity dawns upon us unsullied by any spot or stain, save the green markings, which but bedeck and reveal all the more the chasteness of its glistening white bells. It is welcomed everywhere. Scattered in myriads in some copse or in spreading sheets in some noble domain, it is the delight of many. On the little lawn of the suburban garden, on the rockery, or in the border of the amateur in a small way, it is dearly cherished. In pots it adorns the window of numbers of lordly dwellings



AN EFFECTIVE GROUPING OF SNOWDROPS IN A WOODLAND BORDER.

annuals for growing upon walls, and annuals that will thrive where scarcely any other plant will grow.

We have hardy annuals also that well repay for pot culture, and I have often been surprised that so little use is made of them in that special way. Nothing in the spring is more delightful than pots of *Nemophila insignis* with the growth completely hiding the pots and studded with its bright blue and white flowers. The *Mignonette* is grown more than the preceding, but its growth in private gardens is not so good as the trade growers produce for our markets. Its requirements are not, I think, so well understood as they should be. The *Viscaria* affords another instance of what may be accomplished in pots with hardy annuals, such as *V. cardinalis*, *V. elegans picta*, *V. oculata* and *V. oculata cærulea*, yet these are rarely seen so grown. The distinct advantage of annuals in pots is that they may be cast upon the rubbish-heap when past their best. JAMES HUDSON, V.M.H.

Gunnersbury House Gardens, Acton.

or cut and in glasses is a source of pleasure to many. What delight has not been given to many a weary sufferer by the gift of a bunch of Snowdrops, culled, it may be, in the green pleasaunce and sent by kindly thought to the pain-worn in some great city hospital! And, most sacred of all its benefactions, the Snowdrop springs happily in many a God's Acre, decking the graves of our loved ones and bringing with its annual uprising the hope of the immortal.

It is difficult, as we think of the Snowdrop in its higher aspects, to make a descent to the ordinary and more utilitarian points which fall naturally within the scope of an article of horticultural interest, but in this respect also the Snowdrop forms one of our most interesting studies. It is needless, possibly, to devote any time to a consideration of where the flower can best be employed. That is not a fitting subject of consideration with a flower so universally cultivated, and we shall more profitably, perhaps, devote

these notes to a consideration of the Snowdrop in its several forms and of their respective values to the garden.

The Common Snowdrop.—Probably no other Snowdrop is so well suited to our general needs as *Galanthus nivalis*, the common one, which has for countless years adorned the gardens and domains of the three kingdoms. It may be reckoned as one of our own flowers, a plant which through long ages has been to us as much a native as any. It is, without doubt, the most useful and enduring of our Snowdrops, and remains and thrives in many places where others of the race succumb. It is so well known that comment upon it is uncalled for. Whether we employ the single or the less graceful but very pleasing double form, we cannot exclude the common Snowdrop from our gardens and pleasaunces. In masses, such as those shown in the illustration on page 9, the common *G. nivalis* is exceedingly beautiful.

Some Choicer Varieties.—*G. nivalis* has given rise to many forms besides the double one already mentioned, and some of these are available to purchasers, although a good number are only in the hands of a few enthusiasts. One of the finest of all the forms of *G. nivalis* is the South European form, *G. n. Imperati*. This is a truly noble Snowdrop, though not so reliable on some soils as our smaller ordinary form. The best variety of *G. Imperati*, as it may be called for the sake of brevity, is *Atkinsii*, a magnificent Snowdrop. Another, which we may call pseudo-*Atkinsii*, is also very fine. Many other varieties have been collected or raised from the different forms of *G. nivalis*. Among these are the so-called yellow Snowdrops, which have the markings yellow instead of green. *Lutescens* and *flavescens* are the names the single yellow ones bear, and there is also a double one with yellow markings. The green one, *G. n. virescens*, is a singular flower, marked and shaded with green on the exterior. *Scharlokii* is a quaint little one with divided spathes, curling, horn-like, over the flower, and marked outside with green. The late Mr. James Allen and others raised many lovely Snowdrops from *G. nivalis* and others, but these cannot be discussed at the present time. Of the other Snowdrop species, the best known is probably *G. Elwesii*, the Giant Snowdrop of Asia Minor. It is so widely cultivated that it requires no description. It is a variable species, and some of the forms are very inferior. The varieties *Cassaba*, *ungiculatus* and *Whittallii* are the best. In many gardens, however, *G. Elwesii* is not very permanent. *G. plicatus*, the Crimean Snowdrop, is an old occupant of British gardens, and it is easily recognised by the leaves being plicate or folded back at the margins. It is a handsome *Galanthus*, and its best varieties are the *Straffan* one and *G. p. Fraseri*. Hybrids between this

and *G. nivalis* have been raised, some being very fine. *G. Ikariae*, the Nikarian Snowdrop, is handsome with its broad green leaves and fine flowers. It is recommended in preference to *G. latifolius*, another green-leaved species. Other Snowdrops to be met with, all of considerable beauty, are *G. caucasicus* and *G. byzantinus*, but the best for all general purposes are *nivalis*, *Elwesii*, *plicatus*, and their varieties.

Autumn-flowering Snowdrops.—Mention must now be made of the autumnal-flowering Snowdrops, all considered really varieties of *nivalis*. Some of these are delicate, and with me they have all shown a tendency to come into line



PEA SENATOR, ONE OF THE BEST MID-SEASON VARIETIES.

with the ordinary one in point of time of flowering, though this is not the experience of all. *G. cilicicus*, though later than some, is the most reliable; but *G. octobrensis*, *G. corcyrensis* and *G. Elsæ* are all prized by their owners. As the Snowdrop will grow almost anywhere, although there are a few places where it does not live long, cultural details are unnecessary. It may be said, however, that deep planting gives the finest flowers. Snowdrops are very charming for table decoration when arranged in low vases with green Ivy or Moss as a foil. If wet sand is used instead of water each stem will stand erect in the desired position.

S. ARNOTT.

THE KITCHEN GARDEN.

SOME OF THE BEST VEGETABLES DURING 1911.

THE summer and autumn of 1911 will long be remembered by all cultivators of kitchen garden produce. The great heat and extreme drought during the greater part of the summer and early autumn were anything but favourable to the growth of the large majority of vegetables. Indeed, in many localities it was almost impossible to procure some kinds fit for table use. Not only in such seasons is the scarcity felt at the time, but it also has a deleterious effect on the winter and spring supplies. In spite of this, some very meritorious specimens were exhibited at our leading shows, especially so in Scotland and the North, where a heavier rainfall was recorded, and the cooler conditions proved beneficial to many things. Some very fine examples were also noticeable, though not nearly in such large quantities, at the great show of the National Vegetable Society, at Shrewsbury, and the Royal Horticultural Society's exhibition.

Peas.—These were exceedingly fine in the early season, but the midseason varieties were of very short duration, and the late ones proved almost a failure in many districts. Even that robust and invaluable sort *Autocrat* failed to grow and yield a crop, the first time in my recollection this has proved unsatisfactory. There have been several new introductions, but possibly owing to adverse circumstances these have not done themselves justice, and the best standard varieties still prove the most reliable. *Gradus*, *Early Morn*, *Early Giant* and *Edwin Beckett* are still quite among the best as earlies, all being of first-rate quality. *Duke of Albany*, *Alderman* and *Quite Content* are still unsurpassed as midseason varieties, either for home use or for exhibition. *Autocrat* and *Masterpiece*, in my opinion, are unrivalled for the latest supplies.

Broad Beans.—Except quite the earliest crops, these in a great many cases proved a dismal failure. *Leviathan*, when a true stock is

obtained, is yet one of the very best for any purpose. *Green Windsor* is a splendid variety of exceptional quality for late use.

Runner Beans.—Except for quite late supplies, it is doubtful if any of the present generation remembered a more disastrous year, especially when grown in the ordinary way and without any special care bestowed upon them. These sold at fabulous prices, and even then were almost unobtainable in good condition. The supply of seed of these for the coming season will unquestionably be very short. *Scarlet Emperor*, *White Emperor*, *Best of All* and *Prizewinner* are all very fine, and, as far as I know, the best.

Beetroot.—Where the seed was sown fairly early, quite satisfactory crops resulted. The Turnip-rooted variety did remarkably well, and many of the large black varieties were excellent.

Borecoles or Kales.—I have seldom seen these make such poor growth, especially during the autumn; but, thanks to the open weather experienced up to the time of writing, these have made up somewhat, and will in all probability produce a good yield in early spring. Cottagers', Scotch and Labrador are among the best.

Broccoli.—The same applies to these. Only on rich, good, retentive soil have these made satisfactory growth, and the supply of these for winter use will, I fear, be much below the average. The very latest varieties are more promising. Late Queen, Model and Latest of All are our best.

Brussels Sprouts.—These, on good ground, are with us an exception to the Brassica tribe, having done splendidly and given us an abundance of good, firm buttons. We depend principally on Dwarf Gem, an extremely fine variety, which should find a place in every kitchen garden.

Cabbage.—This crop did very well in the early season, but was far from satisfactory during the continued drought. Rosette Coleworts and Hardy Green are quite good at the present time.

Carrots.—Only in a few cases has this crop proved satisfactory. The Carrot fly and wireworm were very troublesome. New Intermediate, Model and Favourite are a good selection for all purposes.

Cauliflowers.—I never remember such a dearth of good curds during August and early September as was the case during the past year. In quite the majority of cases the plants turned in prematurely and were practically worthless. The earlier crops were good, and so were the later ones. We relied chiefly on Early Forcing, Magnum Bonum and Walcheren, and last year we also had a fine new variety named Duancourt. For midseason Early Giant and Autumn Giant are good; and Mammoth is fine for late supplies.

Celery.—This vegetable, being moisture-loving, naturally resented the unusual weather, the result being poor heads, both in size and quality. The new disease, which has attacked it badly in many districts, is causing much anxiety. I have known cases where the entire crop has been totally destroyed. It attacks the foliage and spreads rapidly, the whole becoming affected and, to all intents, worthless in a few days. Giant White, Aldenham Pink and Standard Bearer (red) are quite the best with which I am acquainted. Celeriac, or Turnip-rooted Celery, where planted on rich ground, has made good growth, and the roots will prove extremely useful.

Cucumbers.—Being sun-loving plants, these, naturally, did wonderfully well, and were in large demand; consequently, growers should have reaped a good harvest from these. We grow chiefly Ideal, which has all the qualities of a first-rate Cucumber, being handsome in appearance, most prolific and of excellent quality, unsurpassed for exhibition work.

Leeks.—These in most cases, especially in the South, were anything but first-rate, a very large percentage of the plants going off in the early stages of their growth, owing entirely to the extreme heat. International with us proved to be far the best.

Lettuces.—Except in the early and late seasons, these were practically a failure, the plants being

completely burnt up, and good Lettuces could hardly be purchased at any price. This applies equally to Cos and Cabbage varieties.

Maize or Indian Corn.—I have never seen this vegetable, which is annually increasing in popularity, so fine as during last year. The cobs were quite equal to anything I have ever seen imported. Country Gentleman is an excellent variety for garden culture.

E. BECKETT.

(To be continued.)

PEA SENATOR.

ALTHOUGH this variety has been in cultivation for some years, it is still grown very extensively, both for private use and for market. It is one of the most reliable second-early or midseason Peas that we have, the large, well-filled pods usually being produced in pairs. The haulm, which is usually of a robust character, attains a height of



THE PINK-FLOWERED VARIETY OF ERICA GRACILIS.

2½ feet to 3 feet. During the drought of last year Senator gave better results than several other and newer varieties that I grew. H.

THE GREENHOUSE.

ERICA GRACILIS.

TWO of the best winter-flowering Heaths for greenhouse culture are *Erica gracilis* and *E. nivalis*. The former is a rather variable species, and *E. nivalis*, which is grown in large quantities by market-gardeners, is usually regarded as a white variety of *E. gracilis*. Further evidence of variation in *E. gracilis* is observed in the pink sport illustrated on this page. This is a free-flowering variety which appears to be amenable to good cultivation.

That *Ericas* are rather fastidious in their requirements is a fact that is only too well known in certain districts, and it is the one reason why these plants, which produce lasting effects in the dull days of winter, are not more widely grown. In some localities greenhouse Heaths seem to be affected with a kind of "won't grow" affliction. This is often due to the presence of lime in the water. Under such circumstances and where none but hard water is available, it is an excellent practice to place a bag of soot in a tub of water and to use weak soot-water for watering. It is a common mistake in *Erica* culture to allow the plants to grow unchecked or only to be slightly pruned year after year. With the exception of some of the very hard-wooded kinds and those that are slow-growing, *Ericas* are greatly benefited by somewhat severe pruning after the flowering season is completed. Such a species as *E. hyemalis*, for example, may be

pruned to within 1 inch or 2 inches of the bases of the shoots, and *E. gracilis* may be pruned almost as hard with advantage.

Ericas should never be allowed to become pot-bound, and repotting is best done in the spring about the time when fresh growth commences. The compost should consist of good fibrous peat, together with about one-third its quantity of silver sand. Greenhouse *Ericas* are impatient of fire-heat, and the more light and air they receive within reason the better. In the summer months they should be placed in a cold frame and have their pots plunged in ashes.

BUDDLEIA ASIATICA.

It is rather curious that the virtues of this plant should not have been discovered until the last few years, for plants were flowered in England nearly forty years ago. Until Mr. E. H. Wilson

sent seeds home from China to Messrs. Veitch some ten or twelve years ago it was, however, rarely seen outside botanic gardens, whereas it is now fast becoming a necessary adjunct to the conservatory or greenhouse during winter and spring. Grown either from seeds or cuttings, it may be allowed to develop with one or more stems. As the most floriferous plants are those which have formed long, strong branches, it is necessary to provide the plants with good loamy soil and feed them liberally during their growing period. Usually, good examples may be obtained in pots from 6 inches to 8 inches in diameter, though for large specimens somewhat larger pots may be necessary. Cuttings may be rooted in March, and during the early stages of growth a warm greenhouse is needful. About the end of June the plants may be plunged in ashes out of doors, where they will be quite safe until the end of September. By that time they may be anything from 5 feet to 9 feet high, with numerous side branches clothed with lanceolate leaves 6 inches or more long, dark green above and silvery beneath. The small, fragrant white flowers are borne in great profusion in long racemes from the terminations of the main and side branches, and the flowering period extends

so obtained will, if they are kept growing, flower in a satisfactory manner the same year.

This modern method of quick returns was well exemplified at the meeting of the Royal Horticultural Society on July 18 last, when Messrs. Veitch exhibited a splendid collection of Gloxinias, showing a wide range in the colour and marking of the flowers. These were all the produce of seed sown early in February, so that the plants were really at the time they were exhibited less than six months old. Not only is the short time in which these plants attain flowering size worthy of note, but a characteristic present-day feature is that, owing to the great care exercised in the saving of the seed by our principal seed-dealers, the different forms may, as a rule, be depended upon to come true when raised in this way.

A good illustration of this was brought under my notice early last autumn, when I was shown some beds of Begonias raised from seeds supplied by one of the firms that advertise in *THE GARDEN*. The plants were nearly as even as if they had been propagated from cuttings, the flowers all of one uniform high standard and scarcely a rogue among them. The colours were yellow, scarlet, crimson, and white.

surfacing of the same compost, sifted very fine. This will still allow a space between the surface of the soil and the rim of the pot or pan, a very necessary precaution, owing to the fact that the receptacle is to be covered with a pane of glass when the seed is sown. It is very essential that the soil before using be baked or heated in some way, in order to destroy all animal and vegetable pests which might prove fatal to the tiny seedlings. Before sowing the seed the soil should be thoroughly watered, but if this is done with a rose, however fine, it is apt to make the surface too solid. A good plan is to stand the pot or pan in some slightly tepid rain-water at such a depth that the top of the water is just below the surface of the soil. The water will thus enter by the bottom hole or holes and percolate gradually through the entire mass. This system is the best to adopt in the case of all minute seeds and Fern spores.

Sowing the Seed.—This should be sprinkled as thinly as possible on the still moistened surface, placing the pots in a structure where a minimum temperature of 65° can be maintained, rising, of course, during the day. A little bottom-heat will, if it can be provided, be an advantage. A piece of glass should be placed over each pot or pan, and the whole kept well shaded till germination takes place, which will be in a few days.

Treatment of the Seedlings.—

When the first true leaf is developed, the young plants should be pricked off, the pots being prepared as for sowing, except that the soil is made rather less firm. A slender piece of wood with the apex cut in the form of a V is very useful for lifting the young plants. With a pointed dibbler in the right hand and this in the left, the delicate operation of pricking off may be successfully carried out. Directly the seeds germinate, the glass and permanent shading must be removed, but at no time must the sun be allowed to shine on the tiny plants. Under favourable conditions the young plants will quickly make satisfactory progress, and in a genial growing temperature they will soon be sufficiently advanced to pot them off singly into 2½-inch pots. For this purpose much the same soil

mixture as that recommended for sowing the seed may be used, but, of course, it need not be sifted as finely. The young plants, both of Begonias and Gloxinias, will thus be kept growing freely, that is, if given the ordinary treatment of the occupants of the warm greenhouse or intermediate structure. Directly the pots are well furnished with roots, the plants should, according to their vigour, be shifted into pots from 4 inches to 5 inches in diameter. For this potting rougher material may be used. A mixture of three parts good fibrous loam to two parts of leaf-mould and one of sand will form a very suitable compost for both classes of plants. As they become established after their last shift, the Begonias must be hardened off, especially if it is intended to bed them out; but in any case the temperature of an ordinary greenhouse will be sufficient for them. The Gloxinias, on the other hand, are benefited by somewhat warmer conditions, though, once thoroughly established, they will in the summer succeed perfectly without any artificial heat.

H. P.



BED OF TUBEROUS BEGONIAS AT MALVERN LODGE, WORCESTER PARK.

over two or three months. By rooting a number of cuttings at a later date it is possible to have nice plants 2½ feet to 3½ feet high in 5-inch or 6-inch pots, which are valuable alike for greenhouse or room decoration. It is probable that it might be grown successfully out of doors in the South-West Counties, though it is not generally suitable for border culture. Young plants are, as a rule, preferable to those three or four years old.

W.

RAISING GLOXINIAS AND TUBEROUS BEGONIAS FROM SEED.

It is not so very many years since Gloxinias were, generally speaking, principally increased by leaf-cuttings, and tuberous Begonias to a considerable extent by cuttings of the young shoots in the spring. Even in the case of seedlings of these last-named, they were usually considered of small account until the second year. Now all this is changed, for if the seed is sown early in the year, say, in the first half of February, the young plants

Soil for Seedlings.—Though the requirements of the Gloxinia and the tuberous Begonia when mature are different, yet for the sowing of the seed and the treatment during their earlier stages they may well be bracketed together. The seeds of both of them are exceedingly minute, so that especial care must be taken in the sowing and subsequent treatment. Whether shallow seed-pans or ordinary flower-pots are used for the seeds, they must be quite clean and effectually drained to within a couple of inches or so from the top. In order to encourage the tender rootlets and induce the young plants to grow freely, a liberal amount of good leaf-mould should be mixed with the compost, a suitable proportion being one half made up of loam and silver sand, and the other half of leaf-mould. With a little rough material placed immediately over the crocks, this compost, having been rubbed through a sieve with a quarter-inch mesh, should be put in the pans or pots, pressed down moderately firm and made quite level. A space of about half an inch should be left below the rim to allow of a quarter of an inch

GARDENING FOR BEGINNERS.

GOOSEBERRIES AND CURRANTS FOR LARGE AND SMALL GARDENS.

MANY gardeners and amateurs have only a limited space where they can grow fruit, and in consequence are restricted to a very few bushes of the useful Gooseberry. But if cordon trees are bought or raised, many positions could be found for them, such as on a north wall, fence,

near the edge of walks, or trained to wire supports across the garden, and other suitable situations will also occur to the observant cultivator.

The best time to plant is from November to March, but if it can be done before Christmas it somewhat relieves the pressure of work when the days begin to lengthen. The condition of the soil must be

in height from 3 feet to 5 feet, the variety of Gooseberry being grafted on stems of *Ribes aureum*. Then there are palmate-trained pyramids and cordons, such as upright single, double and triple. It is to the cordons, however, that I would draw special attention. They are ideal for a small garden, and where it is desirable to prolong the supply of ripe fruit, this can be accomplished by planting a few specimens on the north side of a wall or fence. When grown in this way they produce an abundance of berries, and I have seen upwards of one hundred and fifty splendid fruits on a three year old triple cordon. By this method a greater number of varieties can be included and large quantities of fruit secured from a small space, while they are easily netted where birds are troublesome. The training of a cordon begins early in its career. The plants for this purpose are selected from the rooted cuttings, and must have shoots that are nearly vertical and in a line with each other. Each shoot (one, two, or three, as the case may be) is tied to a stake, and the remaining growths are cut back to form fruiting spurs. Each year the leading stems are allowed to grow about 1 foot till the desired height is attained, and all side shoots are cut back to three buds in winter; but in July it is also advisable to pinch out the point of each side growth and pull away any that are formed around the base. This will help the fruit considerably. Bushes are not pruned so hard, the object being to maintain an open and well-balanced head. Upright-growing varieties should be pruned to a bud pointing outwards, while for those possessing a weeping habit an inside bud should be chosen when cutting back the lower branches. This operation is usually left till the spring where birds are likely to take the buds: but if a dressing of soot, lime and milk is sprayed over the trees in November, they will be protected to a great extent. A dry day should be selected for this purpose.

Some Good Varieties.—The number of varieties in commerce is almost legion, but there is not much to choose between some of them, and one can procure a representative collection by confining it to a dozen or even less. For picking green, Keepsake, Leveller and May Duke are recommended, the latter being exceptionally early, with berries clear and bright in appearance. All three are good croppers. Among the best dessert Gooseberries are Langley Beauty, which has yellow fruits, large and of very rich flavour; Early Green Hairy, very rich and sweet, but rather small; and Langley Gage, white, described as extra sweet and delicious. These are early varieties. For midseason we have Whitesmith, a splendid-flavoured sort; and for a later supply Golden Gem, which bears attractive yellow berries; Keen's Seedling, Iron-

monger and Warrington, which are all reliable varieties and in the front rank for flavour, cropping and vigorous growth.

Red and White Currants.—What has been said of training the Gooseberry applies with equal force to either Red or White Currants, both of which produce very large clusters of fine fruit if they are pruned closely each year. The young shoots should annually be shortened to 1 inch or 2 inches of the main stem. These Currants make handsome pyramids and bear profusely when the young wood is shortened to form spurs as described. That the White Currant is amenable to a restricted system of training—and the same applies to the Red Currant—is clearly shown by the illustration on this page, which depicts a single cordon in full bearing. On the other hand, the Black Currant is not adapted to this mode of culture, for, unlike the Red, it fruits chiefly on the young wood made the previous season.

Red Currants do remarkably well when trained to wires as single, double or treble cordons. This method of culture yields excellent fruit without taking up too much room or smothering up the neighbouring plants, and this is a matter of the greatest importance in many gardens. A few good varieties of Red Currants are Red Dutch, of sweet, rich flavour, bunches short; La Versailles, large and good, abundant bearer; La Hâtive, early; and Raby Castle, late. There are not many white varieties, and of them White Dutch, a well-known sort, is as reliable as any.

B. T.



A SINGLE CORDON TREE OF WHITE CURRANT.

taken into consideration, and the operation never performed when it is wet and sticky, for it is much better to lay the trees in a shallow trench till a favourable opportunity occurs. Deep planting ought not to be practised, and no manure applied, if the soil has been previously well treated, till the young trees begin to bear good crops, when a mulching of fresh stable manure in March will greatly benefit them. Where the soil is of a sandy or gravelly nature, more liberal dressings are necessary, and it is a good plan to dig a portion in between the rows, as this will improve the fruit both in size and quantity. When preparing the ground, it should be deeply dug and all weeds removed, especially the wild *Convolvulus* or Bindweed, which becomes a most troublesome pest in a very short period if allowed to remain.

Methods of Training.—These are various, the most common being the bush-trained tree, which should have a stem at least 1 foot high with the branches spread in all directions and so arranged that air and light can pass through, while sufficient space must be left for the hand to gather the fruit. Standards are sometimes grown which form compact heads, and generally bear large crops. They vary



A WELL-TRAINED GRIDIRON CORDON GOOSEBERRY BUSH.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The New Year.—Before commencing my calendar notes for the ensuing year, during which I hope to treat upon the various branches of indoor and outdoor gardening with the best methods known to myself, I would like to deal with a few preparatory notes. Though the present may appear to some a very dull season, there is a great deal of work that can be done that will do much to relieve the pressure that must inevitably arrive in the spring.

A Clean Garden.—It has always been my aim to have a clean garden to commence with in the New Year, and to properly clean up and dispose of all rubbish to the best possible advantage.

A Use for Old Leaves.—Leaves are, of course, the greatest bore, and means should be adopted to store them where they cannot prove a further hindrance, but can be put to the best possible use. Here we have an enclosure made of stout boards, and each year one-half, that is, the oldest, is wheeled out and makes a useful bulk of material for adding to vacant ground, especially where the land is of a heavy character. The resulting gap is then filled up as quickly as possible, and a covering of the old material placed on the newly-carted leaves to prevent them escaping, and on such a heap we place our cold frames and so obtain a steady bottom-heat for providing early vegetables. For potting purposes a further heap should always be made of Oak or Beech leaves for preference, and free from sticks and other rubbish.

Preparing Soil for Seed-sowing.—This is an important item, and much is needed in a well-ordered garden for pricking out the various plants into boxes and for seed-sowing. Old potting soil should always be retained for this purpose and stored in a dry, open shed, and during wet weather be passed through a fine-meshed sieve. Manures, sand and other sundries ought to be stored in the best possible manner.

Protecting Plants from Frost.—Protecting material for the various occupants of frames should be kept in readiness and in a dry state, as oftentimes the severest frosts of the season are experienced in the New Year. For this purpose good Archangel mats are invaluable, with an extra covering of straw or Bracken if needed. Much assistance can also be given to glass-houses or frames containing hot-water pipes by covering the roof glass with mats or blinds; this is much to be preferred to excessive heating.

Tender Shrubs, both on walls and in the open, will need some slight protection in the event of severe weather, and reed mats are excellent for the purpose. Very small specimens are well protected by being enclosed with wire guards and a little dry Bracken shaken in among them. Some of the choicer alpine plants that are difficult to grow and resent too much wet weather are easily protected with a sheet of glass firmly fixed over the plant to ward off heavy rains.

Ventilating Frames.—Whenever the weather permits, give air to the occupants of frames, and for all hardy subjects in mild weather remove the lights entirely and always admit air on the leeward side. Any plants requiring water should be attended to as early in the day as possible and when the weather is brightest.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Seakale.—We have been using heads forced in a stove Palm-house, but for some time hence Seakale comes on sufficiently well in a Mushroom-house. Only enough at a time should be placed there to force to keep up the needed supply. Cut off all the roots before forcing. Of these I shall have something to say shortly. Meanwhile, if the weather permits, the whole crop of Seakale should be lifted and stored for future use.

Endive.—This, of course, is not forced, the plants being lifted and placed in a dark cellar or Mushroom-house in the coldest part, where in a short time the leaves are blanched. Lifted with a ball of soil about the roots, they need only be placed on the hard floor, requiring no further attention. Enough to last five or six days should be lifted from the frames at short intervals.

Vegetable Seeds to Sow.—For exhibition a few seeds of Onions, such as Ailsa Craig, and of Leek Pitt's Lyon should be sown at once. The latter takes some time to germinate even in a warm house. Sow also in cutting-boxes Brussels Sprouts, Cos and Cabbage Lettuces, these to be transplanted into frames; forcing Cauliflowers, to be potted later; and, if Parsley is likely to be scarce, some of this, to be picked from the boxes.

Raspberries.—These should be done up for the season, the canes cut to the proper height and tied to wires or stakes, seeing first of all that any stakes that have rotted are renewed. A dressing of rotted cow-manure has a very beneficial effect on this fruit, and should be applied at this time.

Gooseberries.—If closely pruned, defer pruning for some time; but if the old shoots only are removed, the bushes may be pruned at once. The latter method secures the largest crops; but unless the fruit is thinned when green, the berries do not attain the size of those pruned closer. Those on walls may also be pruned either way, and the main stems retied to the nails.

Red Currants.—The side shoots of this fruit must be cut in very close, else ugly snags are formed in course of time, which are a hindrance when the fruit is being gathered. Keep the centres of the bushes open, and always retain a few longish shoots of the previous year.

Black Currants.—These should have been pruned long ago, but if they have been overlooked, remember that all that is necessary is a thinning out of the older growths, and no more of the last year's should be left than enough to furnish each bush without being crowded in summer. In Cornwall there is a system in operation which consists in cutting down to the ground half of the stock annually, thus always having young wood for cropping. As one means of preventing the spread of big-bud, it might be advantageous to try this.

Other Small Fruits.—Of these the most desirable is the Parsley-leaved Bramble, a prodigious cropper and late. All it needs is the removal of last year's cropping shoots, a slight shortening of the young ones, and proper means of support given. The Loganberry is very much more vigorous, and, besides the worn-out growths, the more weakly of the young ones should be removed. The Wineberry asks for the old shoots alone to be removed.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

The New Year.—Time passes very quickly; it does not seem a whole year since the commencement of 1911, but to look forward to January of next year the time seems long. Much good work may be done in a year. New gardens will be formed, old ones renovated, and very few indeed will escape alteration of some kind. The alterations will be carried out with a view to improvement and to create new interest in the immediate surroundings of the dwelling-house. How vastly does a nice garden improve the general appearance of a dwelling-house; and no one can engage in the work of gardening without reaping much benefit, both bodily and mentally.

New Gardens.—When new gardens are formed, the lines on which they are laid out must be governed by their position and surroundings. It is a wise plan to try to have something quite different to the general rule, to avoid formality, to create the appearance of extent, and not to overcrowd and thus cramp the space at disposal. Everything attempted should be well done; only those trees, shrubs and plants that will thrive in town districts must be planted, as unsuitable ones are sure to cause a lot of disappointment and more expense and labour than others which are hardier and of freer growth. I am a town gardener, with experience of gardening in some of the manufacturing districts as well as in towns and their suburbs where the atmosphere is not much thickened by smoke and fogs, and I will give some hints which may prove helpful, especially to beginners—a very enthusiastic body of horticulturists.

The Lawn.—A lawn in a town garden is thought much of, and one cannot wonder at it being so highly appreciated because green fields are far away. It serves many purposes, one of the chief being its fitness as a setting for flower-beds, and also its refreshing influence during the hot days of summer. In winter-time the owner is content to practically hide his lawn under a thick layer of rotted manure. He is unselfish; he loves his lawn and wishes to have it extra green in spring and summer time; therefore he does not mind the untidy appearance the manure presents during the winter. This very heavy dressing of manure is not a good thing for the lawn, as the grass is often killed wholesale and bare places appear in spring. The best way to enrich the lawn now is to use rotted manure, broken up thoroughly; one-half, and gritty soil one-half. The two ingredients, well mixed, must only be put on thinly, and be brushed to and fro gently several times until the end of February, when another light dressing, also some bone-meal, may be given; but details of the work will appear in due course.

The Paths.—Where new paths are formed it is essential that plenty of rough material, such as broken bricks, stones and clinkers, be placed in the bottom and the coarser gravel on the top, with a final layer of small gravel, but the fine gravel should never be put on thickly, else it will get loose in dry weather and much indented in wet. Old paths may be made to resemble new if they are carefully turned. In doing the work the roughest portion should be raked down into the bottom, leaving the finer at the top, but not containing unduly large pebbles; then the surface will again be a nice smooth one, especially if care is taken to have it rounded slightly.

The Herbaceous Border.—The town gardener must take every care of his herbaceous plants, as they are not only popular in these days on account of their great beauty, but because many kinds thrive so well in adverse circumstances and really give every satisfaction, flowering freely during many months of the year. A list of suitable varieties will be given. Very often these plants are grown in shrubberies—in the front part—and then they fail to give satisfaction, as when a spell of dry weather comes they shrivel and lose their leaves. One cannot be surprised, because the shrubs have robbed them of moisture and nourishment. An open quarter is best for them, and the soil must be deeply dug or trenched and enriched with manure. TOWN GARDENER.

SEEDS TO ORDER FOR SCOTTISH GARDENS.

ONE of the very earliest things to be done in the New Year is to make a list of the various seeds needed to meet requirements; then order them, not necessarily from one firm, because there are some vegetables and flowers the strains of which are better from one than from all others. But which is the best is a matter that each must discover for himself. For ordinary purposes it is bad economy to grow a large number of varieties of any vegetable or any plant; indeed, you will be better served with about four sorts of Peas and Potatoes than multiples of that number, and all through, with flowers as well as vegetables, the few are to be preferred to the many.

The names I am about to quote represent reliable varieties of the different kinds, and are not expensive. Early Peas: Dwarf—either Chelsea Gem, English Wonder or William Hurst; early, tall—William I. or Pilot. Potatoes: Puritan, Sutton's Early Regent or Golden Wonder. Broad Beans: Green Windsor; for exhibition—Exhibition Longpod. French Beans: Osborne's Forcing, Canadian Wonder; climbing variety—Princess of Wales. Beet: White's Black. Broccoli: Autumn Protecting, Snow's Winter, Perfection, Satisfaction, Late Queen, Methven's June or Purple Sprouting. Borecole: Dobbie's Victoria. Brussels Sprout: Dalkeith. Cabbage: Vanack, Edinburgh Market, Dwarf Drumhead or London Colewort. Savoy: Green Curled. Cauliflower: First Crop or Methven's Forcing, Magnum Bonum, King or Autumn Giant. Carrot: Early Nantes or Scarlet Intermediate. Celery: White—Sandringham; red—Standard Bearer. Cucumber: Telegraph. Endive: Curled and Batavian. Leek: Lyon Improved. Lettuce: Tom Thumb and Drumhead or Neapolitan; Cabbage—Hicks' Hardy Cos. Vegetable Marrow: Long Cream. Onions: Ailsa Craig and James' Keeping. Parsnip: Hollow Crown. Radish: French Breakfast. Spinach: Giant Viroflay. Turnip: Early Snowball or Golden Ball. Tomato: Perfection, Supreme or Eclipse.

Flower Seeds.—Asters: Ostrich Plume—White, Azure, Rose Pink and Salmon; Comet—White, Salmon, Azure and Dark Blue; Quilled—Lemon, Purple King, Pink and French White; Single—Mauve, Dark Blue and Pink; Giant Single—Light Blue. Alonsoa: Mutisi and Warscewiczii, tall. Alyssum minimum. Antirrhinum: Intermediate—Pink, Apricot, Fire King, Carmine Pink and Yellow Queen; tall—Golden Chamois, Carmine Pink. Pink, Apricot, White, Cloth of Gold, Rosy

Morn, Crimson and Gold. Begonia: Crimson Gem. Calendula: Orange King and Lemon Queen. Canterbury Bells: Cup and Saucer—Pink, Mauve, White and Deep Blue. Annual Chrysanthemum: Coronarium—Dwarf Double Yellow and White. Centaurea: Cyanus, the common blue. Celsia: Arcturus and cretica. Clarkia elegans: Double Salmon and Firefly. Cosmos: Early-flowering Pink. Coreopsis tinctoria. Dimorphotheca aurantiaca. Dianthus Heddwigii: Double Salmon. Delphinium: Butterfly or Queen of the Blues (light blue). Gilia coronopifolia. Godetia Schaminii fl.-pl. Humea elegans. Hollyhock: Rose Queen and White (double); single—various. Larkspur: Stock-flowered—Rosy Scarlet; blue—Emperor and Azure Blue. Senecio elegans: Various. Kochia trichophila. Lavatera rosea splendens. Lobelia: William I. Lupinus: Hartwegii, Azure Blue and polyphyllus (white and pink varieties). Linaria reticulata aurea. Love-lies-bleeding: Prince's Feather. Matricaria Golden Ball. African Marigold: Orange and Lemon. French Marigold: Tall Striped and Dwarf Brown. Mignonette: Giant, Giant Red and Giant White. Dwarf Nasturtium: Salmon, Cream and Aurora. Nigella: Miss Jekyll. Canary Creeper. Nemesia: Suttonii, Rich Orange or Mixed. Fancy Pansy. Pentstemon. Phlox Drummondii: Intermediate varieties. Poppy: Nudicaule, Shirley, Cardinal, and Cardinal Salmon Pink. Polygonum orientale. Salpiglossis: Large-flowered. Salvia: Pride of Zurich and Horminum. Saponaria: Calabrica and Alba. Sweet Scabious: Large-flowered—Pink, Mauve and Black. Statice: Sinuata and Suworowii. Ten-week and East Lothian Stocks. Tall Sunflowers. Sweet William: Pink Beauty and Scarlet. Swan River Daisy: Blue and White. Sweet Sultan. Wallflower: Various. Verbena: Mixed. Xeranthemum super-bissimum. Zinnias.

For the Greenhouse.—Ostrich Plume and Comet Asters, tall Antirrhinums, herbaceous Calceolaria, Campanula pyramidalis and Canterbury Bells, Clerodendron fallax, Celosia plumosa, Cineraria, Clarkia elegans, Cyclamen, Francoa ramosa, Freesia, Gesnera hybrids, Gloxinia, Grevillea robusta, Chinese Primulas, Primula obconica, Schizanthus wisetonensis and others, Smilax, Streptocarpus and Trachelium caruleum. Then there are bulbous plants of tuberous Begonias, which should be ordered without delay; and indispensable for the flower garden are the Gladioli, e.g., Childsii, Groff's hybrids, primulinus hybrids, brenchleyensis, Hollandia, H. Mikado, Baron Hulot and Marie Lemoine. Galtonia candicans, Lilium tigrinum, L. splendens, L. Fortunei, L. excelsum, L. chalcedonicum, L. pardalinum, L. croceum, L. Martagon album and dalmaticum are all handsome and present no difficulties in the way of cultivation. Montbretia: Messidor, Chrysis, Germania, Prometheus and Globe d'Or, doubles. If I may mention Sweet Peas, it would be to recommend for general purposes the following: Mary Campbell, Clara Curtis, Thomas Stevenson, Nubian, Edrom Beauty, Zarina, Paradise Ivory, Nettie Jenkins, Melba, Zephyr, Menie Christie, Etta Dyke, Countess Spencer, Elsie Herbert, Mrs. Hugh Dickson, Constance Oliver, Elfrida Pearson, Sunproof Crimson and Mrs. Townsend.

General Remarks.—Let us hope that all rough outside work, such as the cleaning of shrubberies, the final sweeping of lawns, the turning and clearing up of heaps of rubbish and such-like necessary but unremunerative jobs, has been got out of hand, so that we may begin the New Year with plenty to

do otherwise of a more refined horticultural nature. There ought to be an abundant supply of cloth shreds ready for nailing in fine weather. It is cruel to set men to nail if the temperature is low; moreover, it is a waste of time, because they cannot handle the material properly.

R. P. BROTHERSTON

Tynninghame, Prestonkirk, N.B.

THE PLANTING OF HERBACEOUS BORDERS.

TO-DAY we are wont to see hardy plants in many places—beside the lawn, beneath the trees, in shrubbery, woodland and parkland, each playing a part. In short, there is no position within the limits of a garden, be it ever so small or ever so large or spacious, where hardy plants may not be introduced to advantage. Incongruities there may be—must be—as the outgrowth of an over-zealous or over-anxious worker. Such things are perhaps seen most frequently in woodland or grass planting.

In the border proper this is the less likely to appear, though even here there is the same danger of overcrowding things, and that phase of it more particularly which savours of immediate effect or ostentatious display rather than of that gardening "which doth mend Nature," and which, indeed, is Nature. Hence if the hardy plant border is to represent all that is best, the planter must work intelligently from the beginning, must appreciate to the full the ultimate developments of the varying subjects he may employ, so that the grace and charm of leaf and flower be all revealed to the full. Above all, he must see to it that young, or at least youthful, vigorous examples only be selected at the start, since no preparation of the soil or subsequent treatment or care can in any degree compensate therefor. Huge clumps of plants should never be planted intact; they are, indeed, as the useless log by comparison with the useful example. Almost as bad are the hard, solid lumps of things—Michaelmas Daisies, Phloxes, Pyrethrums and the like—favoured for no other reason than that they exist. To the use of such material may be traced not a few of the present-day failures. The youthful example is a plant of promise, and with free scope for its energies is likely to play its part well. A dozen or a score of such pieces will form a group that will impress the beholder and make a feature in any garden. The big spade-divided, solid-looking clump is but the old-age pension aspect of a once vigorous type. Such an one *has* played its part: how well or ill will have depended entirely upon its early education—cultivation, intelligence, environment—and to-day our garden borders are as dependent upon these things as of yore, more, perhaps, since the great modern wealth of material necessitates a livelier intelligence and a greater discrimination than ever before. E. H. JENKINS.

BOOKS.

Farm and Garden Rule Book.*—The subtitle of this book is "A Manual of Ready Rules and Reference," with recipes, precepts, formulas and tabular information for the use of general farmers, gardeners, fruit-growers, stockmen, dairy-men, poultry-men, foresters, rural teachers and others in the United States and Canada. The book extends to nearly six hundred pages and is

* "Farm and Garden Rule Book," by L. H. Bailey; price 8s. 6d. net. Macmillan and Co., Limited.

divided into twenty-nine chapters, and teems with figures and tables which the author has most carefully compiled. Although the subjects treated of are so numerous, they are, in nearly all instances, fairly exhaustively dealt with. The instructions given apply mainly to the United States and Canada, but a vast amount of them apply with equal force to operations in Great Britain and Ireland. Gardeners, farmers and horticulturists generally who contemplate emigration to either the United States or Canada should possess a copy of the work, as they will find it invaluable to them. Seed tables, planting tables, crops for special farm practices, commercial grades of crop products, forestry and timber, livestock rules and records, exhibiting and judging livestock, and milk and milk products are all subjects ably and interestingly dealt with. Farm engineering, mason-work, tables of American weights and measures and similar matter must prove most useful to a new arrival in the country. The poultry-keeper will find practically all the information he needs in Chapter XX. There is not much space devoted to horticultural matters, but the information given regarding the erection of greenhouses, their heating and management of boilers and pipes, is very serviceable; so also is that connected with window-garden work.

The Profitable Culture of Vegetables.*—

Small holdings are becoming more numerous every year, and those who cultivate them wish to secure as much produce as possible, at a minimum cost of labour and material, from small areas. The author of this book recognises the fact, and has made a very successful effort to place before such cultivators a mass of useful information which they will do well to study. The book runs to 450 pages, and contains valuable hints in a concise form. Although the price—6s. net—is a high one for the million, no earnest cultivator of small holdings, or those who elect to follow the French intensive system of culture, will regret having purchased a copy. In view of the coming importance of small holdings, one cannot but regret that the author has not given a little more information on the subject, though that supplied is of the highest order and will be of inestimable value to the cultivator. In other parts of the book he can find much information which will serve his purpose also. Market-gardeners and others who wish to follow the principles of French gardening will revel in the perusal of the book, as the information given is up to date and exhaustive.

HARDY GREENS FOR SPRING SUPPLY.

ON page 584 of THE GARDEN dated December 2, 1911, the above heading and the paragraph following it drew my attention because of its application to what must always be, or at least ought to be, a first principle in all gardens, that is, a thought for the future.

As one who is in charge of one of the largest Poor Law Institution grounds in the kingdom, where a supply of all the best kinds of vegetables has to be kept up all the year round, I venture to say that if my supply of spring crops had to depend on planting all surplus stocks of plants, it would be a very sorry affair. So I would just like to give your readers an idea of how I am able to realise

a most excellent supply of the very choicest types at a time of the greatest scarcity.

It would be most interesting reading if one could give a daily supply of vegetables which is required in such an institution as I have to supply, but it is on a very large scale, and it needs all the thought and skill that one can put into the work to keep it up. Besides, all the labour is done by able-bodied casuals with spades and forks. It is most interesting, and my long experience of this class of labour will always enable me to speak with some weighty authority upon the value of it in connection with any scheme or schemes for utilising this kind of unskilled labour which any public authority may take up.

In February last I had planted out some thirty thousand Flower of Spring, Early Rainham, Early Offenham and Wheeler's Imperial Cabbage. They got well established in good time, and I began cutting good, solid heads in early May and several times a week afterwards. The supply increased until, as my diary tells me, we cut from July 7, twice a week, seventy to eighty dozen for a week's demand. This planting was supplemented by a few thousand more of June-planted Enfield Market, which have only just been finished. As the heads are cut, each plant is stripped and the ground cleaned. They are then left to sprout again. By this means I have been meeting a twice weekly demand for Cabbage right up to December 3. I have at the present time a plot of ground filled with stalks which have been the latest cut and numbering 4,000, which will be left until late spring, when they will burst out and yield a crop of the sweetest Cabbage sprouts, equalling anything that can be served at that time. I have very fine lots of Curled Greens, Purple Kale and Drumhead Kale, which will not be cut until all the Savoys and Brussels Sprouts are done. When the heads are cut, these again give a great abundance of sprouts. They are then followed by a last early September planting of Cabbage Flower of Spring, followed again by February and March plantings of the above-mentioned varieties, which I find the most useful.

In this way I keep the supply always on the go, and, knowing my demand, I have to scheme accordingly. I never trouble to sow and keep any Cauliflower through the winter, and I can begin cutting very beautiful heads in June. I have hot-beds made in late February for raising early Radishes and Lettuces, and in among these I sow Fisher's Early Forcing Cauliflower and transplant into frames as soon as ready. By this means they are out in the open ground in late April, planted in deep drills made by a three-cornered hoe. This shelters them, and, it being a dwarf grower, they are put out about eighteen inches every way. I must say that I never in my experience saw dwarfer, quicker-growing and more beautiful white heads of the best quality. I then follow on with Early London, Walcheren, Eclipse and Veitch's Autumn Giant. We cut our last supply of Cauliflowers on December 5.

Potatoes are grown in large quantities. I grow Sharpe's Victor, Eclipse, Windsor Castle, King Edward, The Factor and Up-to-Date. My pits will give me a 30cwt. supply of fine dry and good, sound tubers for the next seven months. My general supply has been going on from early August, when Windsor Castle met the demand. Sharpe's Victor was grown in frames and met a special Whitsun week supply. Eclipse I consider a first-class early Potato, so much so that in the present year it will be grown more extensively, to be

followed again by the other varieties. To mention all the other vegetables would be a formidable list, numbering about twenty-seven varieties. Such a place is not always all that is desirable. One has to be very persistent, determined, patient, kind, and to temper justice with kindness in order to get the best out of the men, who I can speak of with a great deal of tenderness and pity for the position they are in.

Sheffield.

V. H. L.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SWEET PEAS AND HEAVY LOAM (B.).—The Sweet Pea loves turfy loam to root into, but not where it is of too heavy a texture. Add a liberal quantity of old mortar rubble, broken small, a moderate quantity of well-decayed manure, with a slight sprinkling of bone-meal, and mix the whole well together. You will then have an ideal mixture for your bottom spit of your trench for Sweet Peas.

BLUE FLOWERS FOR BED (E. V.).—Seeing that you already possess *Ageratum* and *Heliotrope*, and that *Lobelia* would not be suitable, your only hope apparently lies in the Tufted Pansies. We are, however, not inclined to recommend these plants for hot, sunny positions. Have you yet tried the ever-flowering *Viola cornuta atropurpurea*? If not, we suggest an indiscriminate combination of this and its white variety. They are companion plants, associate well, and because of their distinctiveness are not likely to prove incongruous in any arrangement.

CHRISTMAS ROSES (Aberdeen).—There should be no better way of disposing of the flowers of these plants than offering them to wholesale florists as near to you as circumstances permit; or why not try some of the Scottish markets through the leading salesmen? Unless you had large supplies and could guarantee an unbroken succession of the flowers, the London florist, who can generally get all he requires in London and often at his own price, would not consider it worth his while. The best of all ways is to sell them privately to friends, charging what you consider a reasonable price.

YUCCAS DAMAGED (D. H. H.).—The injury to the section of *Yucca* stem sent for examination is probably due in the first instance to a twist of the stem, such as might be caused by rough winds. Such wounds are common on *Yuccas*, and, after a stormy day, twisted and otherwise damaged stems are often noticeable. Very often a section of the branch dies at the point of injury, but only on the side where the greatest damage was done. The good side serves to keep the branch and leaves supplied with food, and the damaged place commences to form a callus of new growth similar to that you send. Not infrequently the roots appear to be too slender to support the heads of leaves—then it is a good plan to provide short, stout stakes; but where a branch is badly damaged, it is better to cut it off and insert it in a pot indoors as a cutting, for roots form quickly.

DUTCH GARDEN (V. D.).—The usual method is to enclose the flower-beds in a rather heavy edging of Box, and pave the walks with a very small pattern of either red bricks or tiles. The smaller these are, the more Dutch they are usually considered, though, for our part, we think them unsatisfactory and incongruous. Naturally, everything has to be arranged on a formal plan, and the more this is carried out with geometrical severity and regularity, despite the fact that it would be in keeping with the object in view, so much the less would it have of our sympathy and approval. The red bricks employed for the pathways, or the red burnt ballast, for that matter, are usually so destructive of the best colour effects the garden might contain that we turn from such formal arrangements to the more natural beauties of the place with a no undisguised sigh of relief. We are, indeed, pleased to get away from efforts which savour of the curious and unbeautiful.

* "The Profitable Culture of Vegetables," by Thomas Smith, F.R.H.S.; price 6s. net. Longmans, Green and Co.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Lieutenant-Colonel David Prain, C.M.G.—We are pleased to note in the list of New Year's Honours issued by the Colonial Office that Lieutenant-Colonel D. Prain, C.I.E., F.R.S., Director of the Royal Botanic Gardens, Kew, has been appointed Companion of the Most Distinguished Order of St. Michael and St. George.

Horticultural Instruction in Edinburgh.—It was reported at the last meeting of the governors of the Edinburgh and East of Scotland College of Agriculture that the special committee had practically arranged a lease for three acres of land for a garden between Mayfield and Liberton Roads, and power was given to the committee to complete the lease and to proceed with the scheme, including the appointment of a gardener. It is proposed to have the walls made suitable for wall fruit, to erect an unclimbable fence, and to provide two glass-houses, a potting-shed, a small lecture-room and heating apparatus.

A Pleasing Greenhouse Effect.—In the greenhouse at Kew a custom has long prevailed of arranging the flowering plants in groups or masses instead of disposing them in a mixed-up manner, as is sometimes seen. An unusual but exceedingly pleasing combination noted there the other day was a fair-sized group of *Eranthemum pulchellum* (*Dædalacanthus nervosus* of botanists), dotted over with the bright orange-coloured *Jacobinia chrysostephana*. The *Jacobinia* well overtops its associate, which is laden with its beautiful blue flowers. In this way the prominent features of each are seen to considerable advantage.

White-stemmed Brambles.—As a contrast to the red and yellow branches of certain kinds of Willow and Dogwood and the rich brown stems of various kinds of *Philadelphus* and other shrubs, the white stems of several kinds of Bramble are very effective. In some cases the branches are so uniform in colour that they might have been painted, and this probably gave rise to the common name of White-washed Bramble which has been given to *Rubus biflorus*. In other instances the white or bluish white colour appears as a bloom over reddish or greenish stems, and it is difficult to say which are the more effective. Until within the last few years, the North American *Rubus biflorus* was considered to be the most conspicuous of the white-stemmed kinds. Now, however, it has to share the place of honour with the Chinese *R. lasiostylus*, which is quite as lovely. Then there are other kinds, such as *R. giraldianus*, *R. niveus* and *R. coreanus* from China, and *R. leucodermis* from North America, which all deserve mention. To obtain the best results, plant in rich loamy soil where plenty of room can be allowed for development, arrange for an evergreen or other dark

background, and prune away the old branches each spring. Not the least beautiful aspect of these plants is presented on a moonlight night.

Daphne Mezereum grandiflora.—It is unfortunate that this free-flowering variety of the common *Mezereum* cannot be more easily obtained, for it is one of the earliest plants of the year to blossom, being six or eight weeks in advance of the type when it blooms at its normal time, while flowers occasionally appear during autumn, a fact which has given rise to a second name of *D. autumnalis* being sometimes applied to it. Should the autumn and early winter be mild, the flowers may be looked for about Christmas, and throughout January they are in good condition, fading about the time that the earlier flowers of the type appear, towards the middle of February. In addition to the time of flowering, it will be found to differ from *D. Mezereum* by its larger and richer-coloured blooms.

Trial of New Roses at Bagatelle.—As in former years, a trial of new Roses will be held in the park at Bagatelle, France, in 1912 and 1913. We are asked to state that new Roses should be sent by raisers, and those who have not previously sent Roses for trial should note that, as far as possible, the Roses should be grown in pots. At least five plants of each variety must be sent, to arrive before April 15. These Roses will be planted in beds on arrival, and remain therein until October of the second year, to give members of the jury an opportunity of having them under observation during two seasons, and thus be in a position to determine their relative merits both as regards flower production and habit of growth. The packages containing the Roses should be addressed to Monsieur de Conservateur des Promenades de Paris (Rosarie de Bagatelle, au Bois de Boulogne, à Paris), en Gare de Neuilly-Porte-Maillot-Paris.

Rhododendron dauricum.—The mild weather experienced during the last month of 1911 and the early days of 1912 proved favourable for the development of the flowers of this *Rhododendron*, and during the first week of January plants at Kew were well sprinkled with flowers. It is a native of various parts of North-Eastern China and Southern Siberia, its distribution being given as from Dahuria to Manchuria and Sachalin. Under cultivation it grows from 2 feet to 3 feet high, with bright brown branches and small oval leaves. The type is usually deciduous, although the leaves on some plants may be semi-evergreen. The reddish purple flowers are an inch or more across and showy. A variety called *atrovirens* is sometimes seen in cultivation. This has smaller leaves than the type, and they are usually evergreen or semi-evergreen. These very early-flowering *Rhododendrons* require a sheltered corner.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Ipomœa rubro-cœrulea.—Such a sight as that depicted on page 628 of the issue of THE GARDEN for December 30, 1911, is enough to make one long for a district where this charming Ipomœa may be grown out of doors. It is only, however, in such favoured spots as that of South Devon where it can be depended upon to yield such a display in the open ground, and in many parts it will be necessary to treat it as an "indoor vine."—H. P.

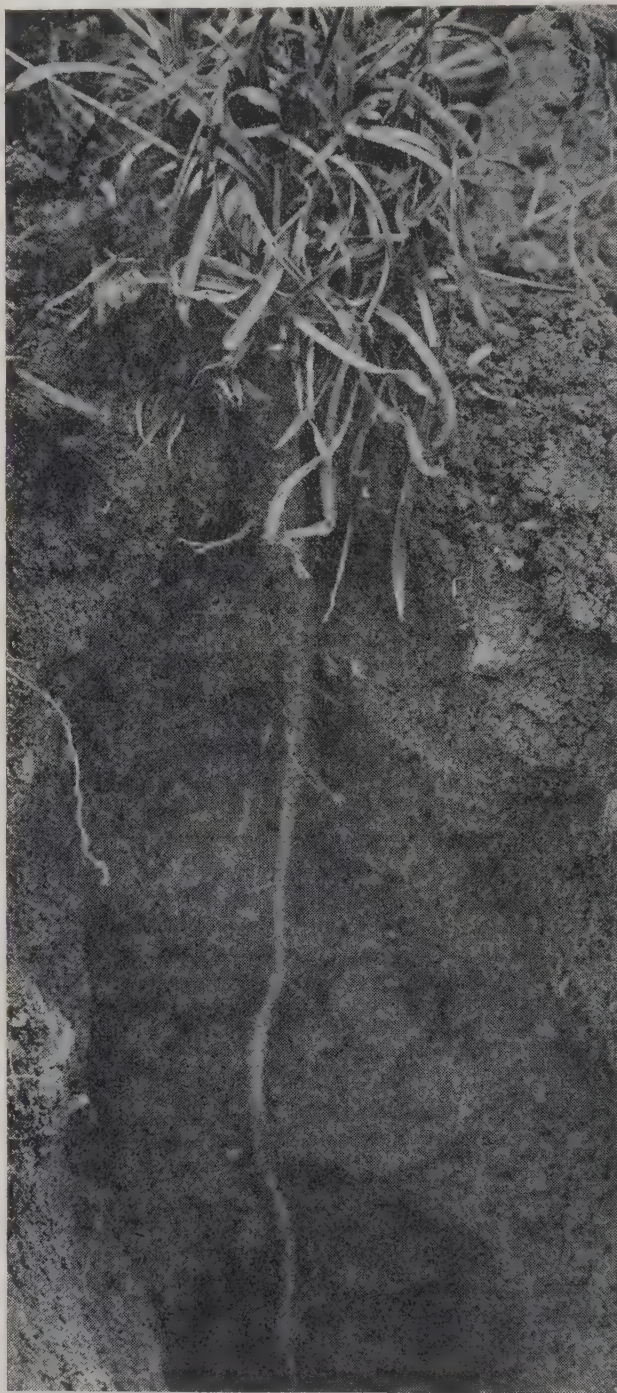
The Red-berried Mistletoe.—This distinct species of Mistletoe, whose botanical name is *Viscum cruciatum*, has been in cultivation at Kew, but whether it is still there I cannot say. [Yes.—Ed.] Fruiting examples have been more than once exhibited in the cool portion of the T Range, which is largely given up to Heaths and Pelargoniums. The host plant was the common Olive, and the Mistletoe seemed to thrive thereon. According to the *Botanical Magazine*, it grows usually on Olive trees.—H. P.

A Collection of Herbs.—I am interested in getting herbs together. Could you suggest others for my list, which is as follows: Aniseed, Burnet, Balms, Basils, Borage, Chamomile, Chives, Chicory, Camphor Plant, Comfrey, Coltsfoot, Carraway, Hyssop, Horehound, Horseradish, Lavender, Mints, Marigold, Marjorams, Pennyroyal, Peppermints, Parsley, Rosemary, Rampion, Rue, Sages, Savory, St. Peter's Herb, Tarragon, Tansy, Thymes and Wormwood.—M. J. G. [To this list may well be added Angelica, Alecost (*Tanacetum Balsamita*), Bermagot (*Monarda*), Catmint (*Nepeta Mussinii*), Coriander, Bay, Fennel, Chervil, Sweet Cicely (*Myrrhis odorata*), Sorrel, Southernwood, Woodruff and Purslane.—Ed.]

The Daffodil Schedule of the London Show.—The schedule as printed and disseminated may have a weak place or two, but is probably a better one than would have been entirely put together by the fault-finders. The ridiculous plan adopted by some societies of limiting the value of the varieties shown, and of only allowing such varieties as are in commerce to compete, is not made obligatory. I know nothing of the trade, but speak from an amateur's point of view. A person with small means and a small garden may have six or eight varieties and have raised hundreds of seedlings, and yet be unable to show them where there are such restrictions. I only find two faults with the schedule. In Section 2, Class 11, six long trumpets, Division 1; and Section 3, Class 20, three trumpets, Division 1 (a); Class 21, three trumpets, Division 1 (b); Class 22, three trumpets, Division 1 (c), it would seem better to have given Division 1 the same number of flowers in each section. But as I said before, here is a chance for the small hybridisers. The other mistake, in my opinion, is Class 16, six hybrid triandrus, one stem of each. Why not three stems of each, as in all the other classes in this section? Many of these hybrids, like the triandrus varieties, do not last for many years, and if three stems were exhibited it would show a probability of the hybrid surviving. The single-flower classes, for varieties not in commerce, are a capital way of bringing into notice new varieties, and would induce the Narcissus committee to notice the great difference there often is between first flowers and those of a succeeding year. The obligation of keeping the

name or number once given to a flower to the same should be insisted on.—AGRICOLA.

Tap-rooting Alpines.—The photograph of *Anemone sulphurea* by Mr. Jenkins in your issue of December 8 is very interesting, but it scarcely supports his original contention (see issue of September 30). *A. sulphurea* is well known to vary in root character when grown from seed in this country, but it certainly cannot truthfully be described as a crevice plant, so does not apply in this controversy. Possibly Mr. Jenkins had no better example at the moment, so I am sending you a photograph of one, viz., *Armeria plantaginea*,



ARMERIA PLANTAGINEA GROWING UNDER FAVOURABLE CONDITIONS, WITH ITS TAP ROOT EXPOSED.

raised from seed and planted out when 1 inch high into a roomy bed of suitable soil—not in a crevice. Yet, as you will see, the inherited habit of the plant has prevailed against the temptation of luxurious surroundings, and produced a true tap root which descended further than I was able to reach. Where are the fibrous roots which, according to Mr. Jenkins' original contention, should have resulted from such treatment? I am not suggesting that plants cannot vary under changed environment, but I believe such change to occur by small steps spread over many generations, not as Mr. Jenkins first suggested, viz., that the

mere increase of suitable soil would at once change a tap-rooting plant into one producing fibrous roots only.—REGINALD A. MALBY. [This discussion must now cease.—Ed.]

A Reader's Moraine Garden.—I send a photograph which I hope will prove suitable for reproduction—[Unfortunately, not suitable.—Ed.]—as it may interest some of your readers who, like myself, have tried their hands at "moraine-making" after reading Mr. Farrar's books. My experimental moraine was very tiny, only about two feet square, enclosed by four big stone blocks, with a depth of about 1½ feet to 2 feet of chippings. In this *Saxifraga cæsia*, *Petrocallis pyrenaica*, *Campanula cenisia* and *Edraianthus serpyllifolius* went triumphantly through last winter's damp. In the spring I added to it, and in the new part *Silene acaulis*, *Dianthus alpinus*, *D. frigidus*, *Omphalodes nitida*, *Edraianthus Kitaibelii*, *Androsace villosa* and *Aretia vitellina* have already made large tufts. Though the rest of my garden suffered terribly from the drought last summer, the moraine plants were always green and fresh. The photograph shows *Edraianthus serpyllifolius* in bloom. It had altogether twenty-four blooms, and the effect of the purple bells on the grey stone chippings was delightful.—E. GAGE HODGE, *Huxham Rectory, Exeter*.

Depth to Plant Fruit Trees.—In reply to the note on page 626, it all depends upon the tree and circumstances. In the late spring of 1910 I planted, close down on a rock chalk bottom, trees which had been grafted close down into the Crab stocks. (By the by, I always like to plant trees on Crab in poor chalk soils.) There were no lengths of stock stem at all, and very little length of root, as I use mostly Crab cuttings for stocks. The garden has since been liberally helped with road soil, loam and manure, and the unions are several inches under. The roots are now coming up for food. I think roots will always do this. If on Paradise and in good soil, I like to get all the stock just below the ground. Then the stock seems to swell as fast as the tree proper. If in poor, hot soil, whether on Crab or Paradise, I like to get a bit of the tree proper into the ground, as I fancy it then absorbs moisture through that below-ground portion, which helps until root action is again full on—this in spite of the fact that some varieties of Apple so planted send out their own roots above the union.—APPLE TREE GROWER, *Kent*.

— I do not think there is a majority of gardeners in favour of deep planting. Position, soil, subsoil and natural drainage must play important parts in deciding. My first experience of the evils attendant on deep planting occurred over twenty years ago when serving as under-gardener at Lindley Hall, near Nuneaton, under Mr. Sidney Andrews. We were both engaged in the autumn of 1889, the grounds and kitchen garden having undergone extensive alterations and additions during the previous two or three years at the hands of a landscape gardener. During the following season we found that something was radically wrong with many of the newly-planted fruit trees, including stone fruit of all sorts. Mr. Andrews decided to examine the roots of some, and the men were set to work on them the following autumn, with the result that most of them were buried 9 inches to 12 inches below their previous level. Most of the new trees were lifted and re-planted at their original depth, and straightway they began to improve. Since that time I have always planted to the old mark.—J. C. WADD, *Leicester*.

The National Rose Society and Amateurs.

In reading the report of the National Rose Society's general meeting, I was pleased to note the great increase of new members, also the financial position of the society. With this great increase of members it is natural to suppose the majority of that number will be competitors, and I think the time has arrived when the prizes should be extended, viz., instead of first, second and third, a fourth ought to be added in many classes, as greater interest would be taken in the competition in the amateur classes. Again, I wish to draw the attention of the committee to the prize-lists of the autumn show. At present there are only two classes in which an amateur can compete, which seems to me rather absurd. Fancy a member from the North of England who would like to compete at this show, and only two classes in which he can compete. What is the result? He abstains altogether, because his expenses are too great. If another class was added, it would be a greater inducement. An additional class of Hybrid Teas to each division would, I think, be more interesting, and would bring more competitors to the show.—W. M.

A Fine Mossy Rockfoil.

Few of the Mossy Saxifrages are more compact than *Saxifraga pedemontana cervicornis*, and none is more pretty when in bloom. The flowers are similar in shape to those of *S. Wallacei*, though not quite so large. As shown in the illustration, the leaves have longer stalks and are more loosely arranged than at any other period of its growth. Just now the leaves are in dense rosettes and almost without stalks, but they are longer than they ought to be, owing to our mild, open, English winter. When the plant goes to rest in the autumn, the leaves overlap one another closely, like the slates on a roof, and this is the winter state in its native habitats on Monte Gennargentu in Sardinia and Monte Rotundo in Corsica, where it ascends to elevations varying from 4,800 feet to 7,500 feet, for it is truly an alpine species. Under cool conditions the flower-stems are only 1½ inches to 2½ inches high, and the flowers are durable like those of the Snowdrop or Primrose; but if the weather is warm and bright, the flower-stems lengthen, and the flowers soon get fertilised by insects and pass into the fruiting stage, maturing good seeds in abundance. The photograph was taken about the middle of May, when the flower-stems were 4 inches to 5 inches high, or just twice the height they would be in their alpine habitats. Though grown in pots, the plants stand in the open all the winter, and are not affected by cold, but rather by the mildness of our winters, which excites them into untimely growth.—J. F.

FORTHCOMING EVENTS.

January 15.—National Chrysanthemum Society's Executive Committee Meeting at Carr's Restaurant, Strand, London, at 7 p.m.

January 17.—North of England Horticultural Society's Annual Meeting at Leeds at 3 p.m. Lantern Lecture by Mr. W. Cuthbertson on "The Development of the Sweet Pea" at 6 p.m.

THE FRUIT GARDEN.**FRUIT TREES IN GRASSLAND.**

IN our last issue we referred briefly to the thirteenth Report of the Duke of Bedford's Experimental Fruit Farm at Woburn. This report is mainly devoted to experiments which have been conducted at the farm for over sixteen years with fruit trees growing in grassland. It has, of course, been well known to practical growers for some years that grass growing over the roots of fruit trees is highly detrimental to them; but until 1903, when the third report of the farm was published, there was no definite data relating to the subject.

The point of most interest in the report now before us is the statement that trees which become grassed over gradually during the course of several years apparently accommodate themselves to the altering conditions, and suffer much less than

substance is, however, readily oxidised into some substance which favours plant growth, and this explains why soil taken from grassland is more favourable than ordinary soil to plant growth after it has been stored for a short time so as to kill the grass. Experiments of various kinds have been conducted with a view to ascertaining whether the grass caused a physical alteration in the soil that would be likely to cause injury; but wherever any change was noted it was favourable to plant growth rather than otherwise.

To the practical grower the following sentence in the excellent summary of the report will, we think, be of the greatest value, because it may safely be taken as a guide under all ordinary circumstances: "To what distance grass should be removed from a tree so as to have no effect on it, must, naturally, depend on the nature and size of the tree, as well as on the nature of the soil; with freshly-planted standard Apple trees, in soil which was not specially favourable to the action of grass,



A MOSSY ROCKFOIL: *SAXIFRAGA PEDEMONTANA CERVICORNIS*.

when the grass is actually sown over their roots. This, undoubtedly, explains, to some extent at least, why orchard trees which have been growing in grassland for some years do not show the ill-effects of grass to anything like the same extent as young, newly-planted trees do. It is stated, however, that, although a tree may have been well established in cultivated land, it does not prevent it feeling the ill-effects when grassed over. Some trees at the farm which were grassed over four years after they were planted were nearly killed. Nor is the injury confined to Apple trees. Those of the Pear, Plum, Cherry, and even forest trees are almost, if not quite, as badly affected.

Although, as we have already stated, the injury that grass does to trees has been recognised for some time past, the actual way in which damage was done has been more or less a mystery. The experiments at Woburn tend to prove almost conclusively that it is caused by a toxic substance formed during the growth of grass. This toxic

a very considerable effect was produced when the grass was 4 feet away from the stems; on the other hand, keeping a space free of grass extending only 6 inches from the stems of freshly-planted dwarf trees was found to have some beneficial result, even on the Ridgmont soil. The proportion of roots extending into the grassed ground which are sufficient to make the grass effect apparent is remarkably small, amounting in some cases examined to only 1-2,000th of the weight of the whole tree." It is evident from the above that, though the removal of only a small area of the grass from over the roots is beneficial to the tree, better results would be obtained if the whole were removed.

We have, on several occasions, had an opportunity of inspecting the experiments at the Woburn Farm, and know full well that they are conducted with the greatest possible care, and that nothing is left undone which can be done to make the results obtained thoroughly reliable. Thus, in the case of the experiments now under notice, the questions

of soil aeration, moisture, food supply and bacteria were all taken fully into account, and each separately and thoroughly investigated and allowed for in determining that it is to a toxic substance, formed by growing grass, that we must attribute the injury that is caused to trees growing in grass-land. What this toxic substance is does not appear to be known; but, happily, it is capable of being quickly and easily transformed into some other substance, also apparently unknown, which is favourable to plant growth.

THE ROSE GARDEN.

ROSES IN POTS DURING JANUARY.

THESE are one of the most important subjects for cut flowers or for conservatory decoration, and it can scarcely be too strongly insisted upon that all plants should be healthy and well established before forcing them in any way.

Pruning.—If not already pruned, this should be done at once. I like the soil to be rather on the dry side when doing the work. Begin by cutting away all weakly and insufficiently-ripened growths. Well-matured growths of what I may, perhaps, be allowed to style ordinary growers, such, for example, as Catherine Mermet, Sunset, Richmond, Liberty and the two grand newer varieties Molly Sharman Crawford and Mrs. Aaron Ward, may be cut back about two-thirds of their length. Do not leave a quantity of wood in the centre of the plants. However good this may be, crowding in the middle will not produce good results. If quantity of bloom is the main object, we need not study the shape of our plant so much, but retain a larger amount of well-ripened wood.

Starting the Bushes into Growth.—Very little heat is needed at first. A steady break invariably comes stronger, and growth comes on very rapidly after a steady start. We prefer a span-roofed house facing east and west to a lean-to or one facing south. The last is exposed to full sun during midday, with little in the early morning and evening; but when built from north to south the plants receive the full benefit from the morning sun and are partially shaded by the bars during midday.

Feeding with Manure.—Keep the plants well on the move after they have received a good start, giving weak liquid manures twice a week. From 1oz. to 2oz. of guano to a gallon of water is a safe and a very forcing stimulant. The drainage from a cow-stall is also very acceptable to Roses, and we find the ammonia arising from this a decided help in keeping the foliage clean and in good health. Ample drainage is needed, because when in full growth Roses require a considerable quantity of water, and the free use of liquid manures would be apt to sour the compost otherwise. I am strongly in favour of a less number of crocks, assisted by half-inch bones in lieu of the finer pieces of broken pots being used so freely. The bones feed and drain at the same time, while the crocks are of no benefit except to help the drainage. One of the chief points is to avoid excessive fluctuations of temperature, these being most injurious. Often the first signs of mildew and general ill-health can be traced to this cause.

Treatment after Flowering.—By the end of May, when the bulk of the flowers have been

realised and Roses can be had from plants upon walls and other sheltered places, it is well to commence ripening the plants ready for forcing another season. Removing the flowers and gradually withholding water is a good method of attaining this; but to seriously check the water supply while a large quantity of young growth remained would be folly. As the plants ripen more air may be given, and after a time they may be removed to some sheltered position in the open and the pots partly plunged in ashes, sand, or other suitable material. The object of partial plunging is to avoid sudden drought, especially on a sunny or windy day; also to keep the plants from toppling over. A copious syringing overhead will help to keep the wood plump and sound without too much moisture at the roots for obtaining the desired rest and ripening. After six weeks' rest those requiring it may be repotted and again plunged. Turfy yellow loam is generally advised, but this is not absolutely necessary. I have found them do very well in good garden loam, well-decayed manure, with a little leaf-mould and coarse sand, helping them by the freer use of crushed bones if the soil is stiff and minus any fibre. Look over the compost closely for small worms. When in the warmer atmosphere it is really surprising how quickly these develop. It is the preparation during the previous season that has so much influence upon the future crop. The earlier and more efficiently they are ripened, the more successfully can they be forced. If fine, the plants can remain outside until the end of September; but if excessive rains prevail, some means should be found for keeping these off. A. P.

SEASONABLE NOTES ON ROSES.

It is in the early part of the year when we generally suffer most from frosts. Formerly the majority of our Teas and Noisettes were tied up and protected; but even those varieties that were considered the most tender are only very slightly protected at the present, and I am inclined to the opinion that we were wont to afford far more winter protection than was needed, or even beneficial to the plants.

Recently a case came before me where the ground occupied by Roses was covered with 5 inches to 6 inches of wood-ashes. This is most unreasonable, for not only is it too powerful a mulching, but the ashes soon become a wet and soapy mess that can never be any protection. The same applies to short manure and any but the coarsest litter. Much the best protection is something that can allow the wet to drain through, rather than conserve it. In the latter case the whole is a frozen mass from only a little frost, and I take it we are fairly well agreed that wet and frost combined are most harmful to plant-life.

The worst point about litter of any description is that it is either battered down into a wet mess or blown quite away from the plants during a frost-laden wind—anywhere, in short, but where it is most wanted. This is a great point in favour of small branches of Fir, Birch or Laurel, which can readily be stuck into the ground to afford shelter from wind. They are also dry and do not heat and coddle the growth, as is too often the case when hay, straw or Bracken are tied among it.

The most vital part of the plant is its base, and to have this embedded in a wet, frozen mess cannot be beneficial. We have frequently made little nicks with the spade, or hoe, to help draw away the surface water from the base of our Roses during winter, and the present wet season has called for

this more than usual. Even if not frozen, the long presence of water at this part should be avoided.

A very safe and excellent plan is to draw up some of the soil to form a mound around the base of dwarfs. This is a sure protection of the bottom and throws away the superfluous moisture. Many Roses that would otherwise have succumbed will be found sound at the base when the soil is removed, and from this source we quickly get useful growth. A. PIPER.

THE ROCK AND WATER GARDEN.

HEATHS FOR THE ROCK GARDEN.

THE introduction of various Heaths to the rock garden serves the double purpose of providing evergreen plants, which aid in taking off the bareness of the place in winter caused through deciduous subjects dying down, and of the inclusion of plants which bear showy flowers and have a prolonged flowering period. They are, in addition, easy to grow, providing they are not planted where lime is abundant in the soil, and that provision is made for watering in the event of a prolonged spell of dry weather being experienced. For planting in the rock garden it is as well to select quite small plants, for when they have to grow in comparatively small spaces between stones, they may be expected to establish themselves very much better than larger and more showy specimens. Autumn or very early spring is a better time to plant than late spring, for at the latter period very little time is left to establish the plants before hot weather may be expected.

One of the prettiest dwarf Heaths for the purpose is found in the alpine *Erica carnea*. At its best it rarely exceeds 6 inches or 8 inches in height, and is often dwarfer. It, however, spreads well, and may be expected to carpet a considerable space quickly. By cutting back after flowering it may be easily kept within bounds. The rosy flowers of the type are conspicuous from February to May; by making use of the several varieties it is possible to have flowers ranging from red to white. A plant of similar habit, but stronger growing, is *E. mediterranea hybrida*. This blooms throughout winter and spring. Vigorous examples sometimes grow 12 inches to 18 inches high, but more often it is seen from 9 inches to 12 inches in height. It is one of the most floriferous shrubs we possess. The autumn-flowering *E. maweana* should be included among suitable dwarf kinds, for it grows but 6 inches or 8 inches high and blossoms with great freedom. The rich red flowers are larger than those of most Heaths.

A moist position could well be given over to *E. cinerea* and its varieties, for although it is the common Heather of our hillsides and moorlands, it is well worthy of room in the garden. It may be obtained in a variety of colours, red, scarlet and purple in various shades being represented, while forms with white flowers are also to be found. The flowering period extends from July to September. *E. Tetralix* and *E. ciliaris* are perhaps hardly so useful as those previously mentioned, their habit being somewhat inferior.

Several of the taller-growing sorts may be introduced with advantage, either as groups in the background or as isolated plants here and there in prominent positions. The Mediterranean Heath (*E. mediterranea*) grows into a shapely bush 2 feet

to 4 feet high, although under very favourable conditions it may be expected to become much larger. Its reddish flowers appear in March and last until May.

A variety with white blooms may be obtained, also a kind called *nana*, which is distinguished from the type by its low, compact habit. *E. arborea*, the Tree Heath of Spain and Southern France, forms a bush from 4 feet upwards to 18 feet or 20 feet in height in its native country. Here it is frequently met with as a shapely bush 4 feet to 6 feet high. Its dark green leaves serve to set off its small, white, fragrant flowers during March, April and May. It is not very hardy, but a variety called *alpina* will withstand more cold.

E. lusitanica, often called *E. codonodes*, a native of Spain and Portugal, is grown largely in the South-West Counties. It may be distinguished from *E. arborea* by its more plumose habit, brighter-coloured leaves and longer, scentless flowers. In some instances it begins to bloom in November or December, and continues until May. Sometimes, however, the earlier flowers do not open until February. The unopened buds are of a pretty pink colour, the expanded flowers white. Between *E. arborea* and *E. lusitanica*, a hybrid, *E. Veitchii*, has been raised. Intermediate in habit between its parents, it inherits good qualities from both, and is very conspicuous. Another early-flowering kind is found in the Portuguese *E. australis*. This is of straggling habit, growing from 4 feet to 6 feet high, usually with a few long, loose branches, furnished with short branchlets, from which the rather large red flowers appear from March to May. Unfortunately, it is of rather tender constitution, hence it is not a satisfactory kind for the colder parts of the country. An autumn-flowering Tree Heath from Southern Europe is found in *E. stricta*. It is of stiff, upright habit, and bears red flowers during July and August.

Spreading Heaths which grow a couple of feet or so high are *E. vagans* and *E. multiflora*, both free-flowering kinds suitable for a position rather far back in the rockery. There are forms with red and white flowers. Most of the Heaths, and more especially the dwarf, spreading sorts, are benefited by being cut over after flowering. This clears away the old flower-heads, saves the energy which would be expended in seed production, and encourages new growth.

D.

NOTES ON RECENT NUMBERS.

Late-flowering Roses (page 602).—I have a Rose given me by a neighbour, the raiser, who named it after his wife, Mrs. Allen Chandler, from which I have had superb blooms within a few days of Christmas. It appears to be a near relation of, and is probably a seedling from, the old

Souvenir de la Malmaison. The petals are of solid, almost waxy, substance. Mine is a difficult garden for Roses, on a hot, sandy soil. This Rose is never in a quite thriving condition and makes but little growth, but the fine late bloom shows how valuable it would be in a soil more sympathetic to Rose nature.

Ferns in Towns (page 602).—The common Male Fern is one of the best of town plants, thriving in narrow, sunless areas and in nearly all conditions. Not only does it do well when planted, but if a plot of ground, even in the heart of the City, should be vacant for a year or two, this fine hardy Fern is likely to grow spontaneously.



THE EXQUISITE HYBRID ORCHID BRASSO-CATTLEYA MARONIÆ.

Solomon's Seal, which associates so well with Ferns, is also a capital London plant, and one of the best of flowering subjects for a shady place.

Late Flowering of Yuccas (page 603).—All my best plants of *Yucca gloriosa* threw up flower-spikes in November. It was sad to see the waste of energy at a time when the blooms could not possibly expand out of doors. In the hope of turning them to some account we cut them and put them in a large pail of water in a warm greenhouse, slinging them in an upright position with strings to the wired rafters. Except the youngest, they all opened, and the blooms could be used indoors, but they had not their usual substance and went off rather soon.

G. J.

THE GREENHOUSE.

BRASSO-CATTLEYA MARONIÆ AND ITS ALLIES.

ONE of the greatest triumphs of hybridisation was the intercrossing of the genera *Cattleya* and *Brassavola*, which are known by the compound name of *Brasso-Cattleya*. The *Brassavolas* are few in number, the principal species being *B. digbyana* and *B. glauca*, but only a few hybrids have been raised from the latter. The former, however, has been largely employed by the hybridist, and one of the best hybrids, which is sometimes quoted as *B.-C. digbyano gigas*, but is correctly known as *B.-C. Maroniæ*, is shown in the illustration. The flowers are large, well proportioned and a soft mauve throughout, excepting for a faint tinge of yellow in the throat of the lip. The chief characteristic is the beautiful fringed margin, which it inherits from *B. digbyana*, a feature that is transmitted to all its progeny, even to the second generation.

Other desirable plants are *B.-C. Thorntonii*, *Gratrixæ*, *digbyano-Mossiiæ*, *Mrs. J. Leemann*, *Marie*, *digbyano-Mendelii* and *Groganiæ*. Both the *Lælias* and *Lælio-Cattleyas* have been crossed with *B. digbyana*, and collectively they make a bold display, while a few are, as a rule, in flower almost throughout the year. So far as culture is concerned, they require similar treatment to *Cattleyas*—in fact, they may be cultivated in the same house—but it is advisable to arrange them in a separate batch, say, at the warmest end of the structure, where they can receive a little more sunlight than is generally given to *Cattleyas* and *Lælias*. Most of the *Brassavola* hybrids possess a strong constitution, and, providing the rooting medium, which consists of *Osmunda* fibre one-half, peat one-fourth and chopped sphagnum moss one-fourth, is kept in a sweet condition, little difficulty will be experienced in bringing them to perfection. The subject of this note and illustration will,

no doubt, always be known in gardens under the popular name, *B.-C. digbyano gigas*. SENTINEL.

SOME OF THE NEWER PELARGONIUMS.

THESE valuable and showy plants were rather in the background for a few years, but, as with all really good flowers, the neglect was merely temporary. It is, of course, usual to hear scoffing remarks made regarding our old friend the *Geranium*, such as "Anybody can grow these," or "Oh! I don't care for these flowers—they are so common"; but I have noticed that the people who despise the Zonal *Pelargonium* are usually those who cannot grow it well. Like most

other plants, this demands skilful attention if we are to have plants and flowers worth looking at. This is hardly the time or place to enter into details of culture; but at some future time I hope, with the Editor's permission, to give my own methods of growing these old favourites.

My present intention is to say a few words regarding some of the more recent introductions, both in the Zonal and Regal sections. I do not claim that my list of varieties includes the latest novelties, but, rather, that it gives only such as have been proved to be of outstanding merit.

Zonal Pelargoniums.—Those who have never seen a good collection of the modern sorts would

Regal Varieties.—If great strides have been made with the Zonals, what can be said about the wonderful advance in this section? The blooms are produced as abundantly as in the old varieties, while truss and pip are easily three times the size. The shades of colour, too, are varied and beautiful. Here are some of the best: Bridesmaid, Dairymaid, Mrs. W. J. Godfrey, Exmouth Rival, Loveliness, Martha Bouchier, Market Favourite, Ruby Acquisition, Attraction, Magnificent, Duchess of Teck and Edward Perkins. The last-named is, of course, a very old sort, but is still at the top in its own particular colour. I have not attempted to describe the colours in this section, as to do so would require a good deal of space, but

be startled by the immense improvement, in size of pip especially. Trusses, too, are much larger than of old, while shades are greatly varied to what they were thirty years ago, when the Zonal was held in greater repute than now. I prefer the single-flowered varieties, although many of the semi-doubles are grand in size and colour and valuable for cutting. Lady Curzon is a blush pink, with grandly - formed, huge trusses. This is the finest of this shade I have seen. Mauretania has a pale salmon centre, shading to almost white at the edges of the petals, a variety that takes the eye of every visitor. Large trusses and beautifully round pips. Flowers freely and for a long season. Cevic is of rather deeper salmon shade than Mauretania. A perfect truss and pip. Dwarf habit. St. Louis is the largest pip I have yet seen. Brilliant scarlet crimson, with large, distinct white eye. Unfortunately, the plant is a rather weak, straggly grower, and the truss rather loose. Dublin is described in the catalogues as rosy magenta, but this does not do it justice. I should call it nearer rosy crimson. Immense truss and pip. The Sirdar is almost as large as St. Louis, and a far better doer. Crimson scarlet, with white eye. Grand truss. Hall Caine is one of the very best. Truss and pip large and of perfect shape. Colour, brick red. Sir Thomas Hanbury is a great bloomer, early and late. Top petals scarlet, lower tinged magenta. A distinct white eye, truss and pip large. Lady Warwick is white, with pink edge. A good truss, and free bloomer. Snowdrop is a grand white. Truss large and goes off without turning pink. Mrs. Brown-Potter is the best bright pink. Large truss and perfect pip. Duchess of Roxburghe is deep salmon, one of the best of this colour. Berlin is scarlet self, large and of great substance. Phyllis.—Colour, a mixture of salmon and bright rose. Immense trusses and pips. One of the best. Olivia is one of the best salmons. Very large. Of bedding varieties, Paul Crampel and Mrs. Robert Cannell make grand pot plants. These, if properly handled, will give grand trusses, and their respective shades of scarlet and salmon are unequalled.



THE NEW SINGLE CHRYSANTHEMUM JOSEPHINE. (*Much reduced.*)

all are distinct and give grand trusses of great beauty.

C. BLAIR.

Preston House Gardens, Linlithgow.

CHRYSANTHEMUM JOSEPHINE.

A GREAT many new Chrysanthemums have quite recently been introduced, thereby adding to the multiplicity of existing varieties. Some of the new ones have come to stay, but the majority will soon pass into oblivion. There has been a wonderful improvement in the singles, and on this page we illustrate one of the best novelties of this section. It is a delightful flower named Josephine, and is a variety that will prove an acquisition to its class.

The flower-head is fairly large, roundly formed, and of a clear butter yellow tone. It received an award of merit last month from the Royal Horticultural Society when shown by Messrs. William Wells, Limited, Merstham.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Early Peas.—It is quite impossible to have excellent Green Peas in use too early in the season, and equally impossible to maintain the supply unbroken over too long a period. Successive sowings must be made and the varieties carefully chosen. Before the end of this month seeds should be sown both indoors and out, provided in the latter event that the soil and the weather are favourable. Choose for the purpose a dwarf-growing, early-podding variety—and there are many such on the market. Indoors the seeds may be thinly sown in boxes or pots containing a light mixture of loam, refuse manure and sharp sand, the surface being made level and firm and the seeds covered to a depth of about an inch. Keep the soil just moist in the greenhouse and germination will commence quickly. The young plants must be grown steadily and uninterruptedly in full light and with abundance of fresh air. Sow out of doors when the conditions permit of it, forming shallow, flat-bottomed trenches for the reception of the seeds, and allow plenty of space. When all the stages are favourable in both instances, the indoor-sown seeds will yield pickings fifteen days in advance of the same variety sown out of doors on the same day.

Jerusalem Artichokes.

Because these plants are so commonly pressed into service as screens to hide some objectionable feature of the garden is no reason why they should be so carelessly grown. The finer the plants the better the screen, and success will only be achieved when the ground is deeply dug and generously manured. For planting, which should be put in hand as soon as suitable weather occurs after the preparatory details have been ac-

complished, choose small tubers of even shape, and allow 15 inches to 18 inches asunder in lines 3 feet apart.

Seed Potatoes.—Sets of the earliest varieties will have been upended in boxes for sprouting some time back, and successional batches must now have attention. Although any shallow boxes will answer the purpose, those with sides narrower than the ends are preferable where space is restricted, as they can be stacked to any convenient height. In any case it is essential that there shall be full light and unlimited supplies of fresh air, in order to encourage strong, healthy sprouts, rather than the spindling apologies for sprouts that

one sometimes sees. If the light comes from one side only, turn the boxes every third day, and where stacking has to be resorted to, the tubers in the middle of the boxes should be brought to the sides, the change being effected at least once in every seven days. It is customary in many gardens to sprout only the early varieties, but all should be done if possible.

Leeks and Celery.—For very early supplies, seeds of these valuable crops may be sown during the forthcoming two or three weeks. It is, of course, necessary to sow in boxes in a greenhouse, and in no circumstances whatever must any attempt be made to hurry the germination or to force on the seedlings when they appear through the surface. Incessant advance at a steady pace ensures strong, healthy plants, which can be easily hardened for planting out when the correct time comes. For the seed boxes the usual compost of loam, leaf-mould and refuse manure should be requisitioned, enough sand being incorporated to ensure porosity. Pleasant moistness of the soil is required, and trouble in thinning will be obviated by very thin seeding.

The Cabbage-Bed.—This is, perhaps, the most important quarter of the vegetable garden in the early months of the year. The man who grows for home use seldom has too great a supply, while the man who cultivates for market expects to secure a handsome monetary return from his stock. To endeavour to hasten growth by the application of nitrate of soda as early as the present date would be unwise in most districts, but progress may be advantageously encouraged by incessant hoeing when the soil and the weather will permit. Run the blade through about an inch beneath the surface, both in and between the lines of plants. H. J.

SOME OF THE BEST VEGETABLES DURING 1911.

(Continued from page 11.)

Onions.—These, when raised under glass and planted out, were, generally, a great success, the quality being much superior than is usually the case and their keeping properties excellent. A good strain of Ailsa Craig is yet the best when large bulbs are required, and James' Long Keeping and Maincrop are still among the best for smaller specimens and for late keeping.

Potatoes.—Seldom have I seen these lift in better condition, being very free from disease and of first-rate quality. Windsor Castle, Up-to-Date and King Edward VII. were good, the latter remarkably so.

Savoy.—The late plantings of these, where the ground was in good order, have made a fine growth, and will prove of extreme value during the winter. Best of All, Perfection and Drumhead are splendid varieties.

Tomatoes.—Never before have I seen these flourish in the open so well as they did last summer, much of the fruit ripening to perfection, and indeed in many instances equalling any produced

under glass. Owing to the hot weather the demand was great, and growers must have been satisfied with the results. Sunrise still holds its own as quite one of the best varieties out of many which have been introduced, and is alike good either for inside or outdoor culture. The yellow varieties, though in many cases quite equal to any of the reds so far as flavour is concerned, do not seem to find public favour. Why, I am at a loss to understand.

Vegetable Marrows.—Strange to relate, this crop was anything but satisfactory, the supply being a long way below the demand. This was particularly noticeable where good provisions in the way of manure were not given. Pen-y-byd and Moore's Cream were the two best here.

E. BECKETT.

Aldenham House Gardens, Elstree.

TREES AND SHRUBS.

CLEMATIS FLAMMULA.

CLEMATIS FLAMMULA, otherwise known as the Fragrant Virgin's Bower, is a vigorous climber, and one of the oldest species of Clematis in cultivation. It is a native of Southern Europe, and was introduced as far back as the sixteenth century. In this country the flowers are produced any time from July till October. These are white or creamy white; but as the species is extremely variable. The fruits are white and feathery and, like the foliage, are borne well into the winter; but at this time of year the plants present a lifeless mass of brown leaves and apparently dead wood. The lifeless



AN ARTISTIC METHOD OF GROWING CLEMATIS FLAMMULA AND OTHER FREE-GROWING SPECIES.

POTATO EARLY MIDLOTHIAN.

WHEN growers are scanning the new seed lists for 1912, they may with advantage make a note of this variety and give it a trial. In my opinion, as an early good all-round variety, the above heads the list. It is a white Kidney, a handsome tuber, with very shallow eyes and splendid table quality. It is a heavier cropper than many of the first earlies; this to a small grower is a great gain. Another strong point is that I do not know of any other early Potato that turns in so rapidly. I do not advise too early planting even for this variety, as, owing to its rapid growth, it makes up any lost time, whereas any variety planted too early gets a check which delays instead of promotes growth. Planted in March last, I dug this variety in fourteen weeks. The tubers were large, and there was an absence of small, useless ones. W.

appearance of the plants in general has often led the novice into the error of severely cutting them down to within a few inches of the ground. It is true that Clematis Jackmanii and strong-growing varieties of this type answer very well to such treatment, but many others, such as Flammula and lanuginosa, although not necessarily weak growers, do not require to be severely pruned. All that is necessary is to remove all dead parts and to thin and shorten back shoots when they are overcrowded. March is generally considered the best month for pruning Clematises.

Clematis Flammula is well adapted for growing over the stumps of old trees. At Kew, like others in the collection, it is trained over gnarled poles placed, as a rule, triangularly and tied in at the top. There are many forms of C. Flammula, and our illustration is of the variety rubro-marginata trained in the manner described.

THE AMERICAN SWEET OR RED GUM.

THE tree which is known to Americans by one or other of these names is only met with in British gardens as a decorative subject, yet in the United States its timber holds an important position in the lumber trade. In England its common names are rarely used, and we are more familiar with it as *Liquidambar styraciflua*, the name given by Linnæus. The name of Sweet Gum originated on account of the fragrance given off by the leaves when crushed, while that of Red Gum indicates the colour of the heart wood. These, however, are not the only common names applied to the tree or its timber, for Yellow Gum is a trade term applied to the yellowish, soft wood, while the familiar cabinet wood which is known as Satin Walnut is also the wood of this tree. It is unfortunate that the same name, or a very similar one, is sometimes given to two totally different woods; yet the adoption of a new name for an old wood is sometimes sufficient to make a success of what was formerly an unmarketable article. Thus Yellow Gum was looked on with disfavour by manufacturers, but when an enterprising English buyer sent home a cargo of wood of the same tree under the name of Satin Walnut, it quickly became popular for the manufacture of the cheaper grades of furniture and for other work. By the confusion of the Red Gum of America with the Gums of Australia, unfortunate and expensive incidents have arisen, for from the timber of some of the Gums, or species of *Eucalyptus*, from Australia the very best paving-blocks are cut. People were induced to purchase blocks of American Red Gum for the street paving, with the result that it was too soft for the purpose, and ample signs of its unsatisfactory character were soon forthcoming. Although it is an important timber tree in America, there does not appear to be any good reason for supposing that it will ever be of any value as a timber tree in this country, for there are other trees which form timber at a quicker rate. It might, however, be more frequently employed for decorative planting, for a single tree bears no comparison to the effect made by a group in the landscape, while it might readily form the subject for an avenue where something a little out of the common is desired.

The most attractive period for the Sweet Gum is autumn, for at that time the Maple-like leaves are brilliantly coloured, various shades of red, bronze and yellow being conspicuous. At other times the glossy surface of the foliage makes the tree attractive, and that, combined with the fragrance and moderately thick texture, easily separates it from the Maple. Under favourable conditions trees 50 feet or 60 feet high may be obtained in this country, but the species grows larger in America. Moist, loamy soil and a somewhat sheltered position offer the most satisfactory conditions. Increase may be effected by imported seeds or by layers, the latter being the more common method. For propagating purposes old stools are often seen in nurseries. These produce a large number of shoots each year, which are pegged down in March. As a rule, a sufficient number of roots have been formed by autumn to allow of the young

trees being severed from the parent stock. *L. styraciflua* has been an occupant of English gardens since 1681, but the number of mature trees is very small. It has never been planted so widely as many other exotic trees of more recent introduction. D.

CARYOPTERIS MASTACANTHUS.

THE *Caryopteris* belong to a small group of shrubs of the Natural Order Verbenaceæ. These include the Scented Verbena, or Lemon Plant (*Lippia citriodora*), *Callicarpa purpurea*, *Vitex Agnuscatus*, *Clerodendron foetidum* and *C. trichotomum*. All these subjects may be said to be on the borderland of hardiness. In comparatively warm and favourable localities, all of them will thrive in the



FLOWERING SHOOT OF THE LITTLE-KNOWN SHRUB, *CARYOPTERIS MASTACANTHUS*.

open garden; but in cold, bleak gardens, the shelter of a south or west wall is desirable. Under almost tropical conditions of last year, all the plants named above have flowered with exceptional freedom. This *Caryopteris* is a native of China, the year 1844 being recorded as the date of its introduction into this country. The clusters of pale lavender blue flowers are borne on peduncles an inch long in the axils of the leaves, towards the ends of the new growths. The flowering season is September and early October. Cuttings inserted in a close frame in autumn form a ready means of increase. The *Caryopteris* should be planted in well drained and fairly light soil. A. O.

THE WOODLAND GARDEN IN WINTER.

THE short note in a recent number (page 619) does but little justice to the enjoyment afforded by such pleasant places in midwinter. In the first place, they are full of beautiful colour—not, of course, the colour of flowers, for flowers there is none, but their absence makes one all the more enjoy the wonderful colouring of the woodland itself, the purple greys of the masses of leafless twig and branch, the many subtle tints of tree bark, the velvet green of the moss, and the bright ruddy tones of the wet, dead Bracken and Beech leaves. Then a slight mist will alter the whole aspect, throwing back the planes of vision to apparently increased distances, creating mysterious illusions, and, by reducing or half obliterating detail, giving that fine quality of breadth and simplicity that goes to the making of a picture.

At no time of the year does one have a better reward for constant watchful care in the matter of tree arrangement and grouping, and at no time, in the ever-growing woodland, can one better judge—aided by the slight mist—which trees had better be removed and which should be retained. Then on the clearer days how grandly the silver-barked Birches stand out against the glistening Hollies—how delightful is the tender grey-green of the Junipers and the full, deep richness of the Yews!

Except for the thinning of trees and careful adjustment of undergrowth, a little occasional closely-restricted planting and such work as clearing Brambles, the woodland requires but little labour. In summer its demands in work are confined to the mowing of the broad grass rides that traverse it, so that in the winter it is the greater pleasure to minister to any need that arises. Last year, after the recent hot summer, there was a fine crop of Spanish Chestnuts. Out of some half hundred trees of some size, four trees produced quite large fruits, as large as the smaller of those imported from the South, and of excellent quality and flavour. We have collected a bushel or two of quite handsome Nuts. But the ground beneath the trees is encumbered with Bramble and wild Honeysuckle and seedling Oak and Chestnut, and it is troublesome to find the Nuts that fall into this ragged and thorny tangle. We are, therefore, clearing the ground completely under these well-bearing trees, so as to be able to collect in comfort the harvests that any later

warm summers may bring. Every winter there is some such service demanded by the tamed woodland—tamed, though never so much tamed as to lose its own wild character. If the woodland garden is left uncared for, there is more than an element of risk that some of the welcome flowering plants would in time become crowded out. A perennial need is the rooting up of an over-rich growth of Bramble, though a certain amount is permitted and even encouraged in the portions where it is the natural undergrowth; but it has to be removed where the ground is carpeted with Lily of the Valley, and kept quite low where there are Daffodils. G. J.

GARDENING FOR BEGINNERS.

HOW TO PROPAGATE THE CALIFORNIAN TREE POPPY.

ROMNEYA COULTERI is a showy plant, known as the Californian Tree Poppy, since its flowers resemble the Poppy. The blossoms are from 4 inches to 6 inches across, pure white, with crinkled petals and golden yellow stamens, while the foliage has a pleasing glaucous hue. There are two methods by which this glorious perennial can be increased, viz., by root cuttings and from seed. The latter is either sown directly it is ripe or in the spring. The writer has produced a few plants in this way by sowing the seed in well-drained pans and then placing it in a cold frame, where germination took effect in five or six weeks. A difficulty arose, however, when the plants were large enough to pot off, for only a small number recovered from the check. If it is decided to adopt this system of reproduction, I would recommend one or two seeds being put in a small pot of light, sandy soil, and when the seedlings appear, to thin out, only leaving one plant, thus preventing any cause for disturbing the ball of roots.

If a specimen of *Romneya Coulteri* is taken from the open ground, a large quantity of suckers or thick, fleshy roots will be noticed, and it is from these that a fresh batch of plants can be procured. It should be borne in mind that it is not necessary to dig up a plant for this purpose, especially where only a small number is required, for with the aid of a spade or trowel enough could be obtained from around the outside, thus leaving the specimen in the ground. The piece of root should be from 2 inches to 4 inches in length when it is ready for inserting in either pot, pan or box, which ought to be filled one-third of its depth with drainage, then a thin layer of fibrous loam or moss and a small portion of compost. The cutting should then be laid in position, either flat or at an angle, but it must be quite covered with soil, and in a month or so it will commence to grow, pushing out several shoots, as shown in the illustration. The root may then be severed as indicated. The rooting medium consists of loam, leaf-mould and silver sand in equal parts, which should be pressed moderately firm so as not to injure the cutting. A cool house or frame where frost is excluded is best suited for them during the winter months; but later on, as growth advances and the pots become full of roots, additional root space must be provided. At this repotting the compost may contain more fibrous loam and less sand, while the size of the receptacle will depend upon the progress made; but as a general rule pots 4½ inches or 6 inches in diameter will prove convenient sizes. When these are filled with roots, the plants may be removed to their permanent quarters. It should be borne in mind that *Romneya* rather resents disturbance, and for this reason cannot be replanted with success.

At one time it was considered half-hardy, but it will stand a fair amount of frost, and I have

seen some nice examples from 4 feet to 6 feet high growing in the South and Midlands, while, of course, it thrives in such favoured localities as Devon and Cornwall. Some years ago a remarkably fine example was to be seen flourishing in a cottager's garden at Croydon, and there is no reason why it should not be more extensively cultivated by amateurs.

The best position for *R. Coulteri* is where it can get plenty of sunlight, away from overhanging trees, and in a deep, rich, sandy loam; then it will succeed and produce its snowy white blossoms from early summer till the autumn is well advanced. Many corners on the south or west side of the dwelling-house could be found for a plant, which would prove a source of pleasure to the owner, while he would possess a member of the floral kingdom that has been

If well—that is sufficiently—covered with suitable soil, the necessary darkness is secured, and then by giving proper attention to the watering, never allowing the soil to become dry and, on the other hand, refraining from keeping it in a sodden condition, the seedlings will never be checked, but grow strongly from the commencement. The best way to give water is to immerse the box or pot in a vessel of water and keep it there, held quite level, until the surface soil becomes dark with the rising water; then as carefully lift out the box. Very frequent watering will not be necessary. Seedlings so raised and kept in a light, not necessarily sunny, position in a frame, pit or greenhouse will be sturdy and soon grow into fine specimens. It is the long-stemmed, weakly plants that prove so disappointing. Early transplanting is essential. Old boxes should be painted with formalin before being used a second time; then fungus growths will be destroyed.

SHAMROCK.



ROOT CUTTING OF ROMNEYA COULTERI THAT HAS STARTED INTO GROWTH. IT IS CUT INTO LENGTHS FOR PROPAGATION.

described as "a herbaceous perennial of the first water." S.

RAISING VEGETABLE AND FLOWER SEEDLINGS.

THE time will soon come when gardeners will be busy sowing seeds of both flowers and vegetables in boxes, pots or pans. Every year the experienced cultivator finds better results from thin rather than thick sowing, and I am quite sure that the beginner will be much more successful if he adheres to the practice of thin sowing. Seeds may be sown as thinly in pots as in boxes, but it is very rarely that they are, and consequently the overcrowding causes weakly growth. It is a fact that seeds germinate more evenly and quickly in the dark than when exposed to the light, and with this end in view cultivators generally cover the seed-boxes or pots with glass and brown paper. I used to do this myself, but I have found that it is not altogether a good plan, as, however careful one may be, the seedlings are weakened very much.

syringed, and in about a week's time the soil should be thoroughly moistened through. In a very short time new shoots will grow, and the dead ends of old stems must be cut off, also others if necessary to the formation of a good plant. Weakly inner shoots will need removing if they tend to overcrowd. The object should be to encourage strong shoots to grow instead of a mass of weaklings. When the young growths are 1 inch long, shake off nearly all the old soil from the roots, carefully prune back ill-shaped roots and repot the plants. Place them in rather small pots to begin with, allowing just sufficient space for a small quantity of new compost. The future repottings must be done as the plants need more rooting space, and in this way very beautiful plants may be grown. A suitable compost is one as follows: Old fibrous turf, two parts; leaf-soil, one part; sand and rotted manure, one part. To a bushel of the above ingredients add a 7-inch potful of old mortar rubble. The necessary feeding should be done when the plants possess plenty of young roots.

B.

HOW TO START OLD FUCHSIAS.

THE Fuchsia is a fairly easy plant to grow, more so during the first year than afterwards. One often sees badly-shaped old specimens, this being due to their wrong treatment at the beginning of the year. The old plants need judicious pruning, the reduction of the old ball of soil, and also some root-pruning; then there will be no difficulty in growing very fine, compact specimens both in the form of pyramids and bushes. We will presume that the cultivator possesses a number of old plants which are now lying with dry soil under the stage of a comparatively cool house. These plants must be brought out, placed on a stage where they will get all the light possible, and some fresh air when the weather is not very cold or frosty.

Then the old stems and shoots must be

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Chicory.—This salad forces remarkably easily. Place five or six crowns in a 9-inch pot in almost any soil and cover with an inverted pot. Keep absolutely dark and warm, and well soak with water when potted.

Rhubarb.—Lift crowns of a well-known early variety that have become well established, lightly cover with soil, and place in the Mushroom-house or dark shed. Syringe or damp with tepid water. Rhubarb can often be accommodated under a stage in the warm greenhouse.

Mustard and Cress.—Sow in shallow boxes fairly thickly, and press the seed with a flat board on to the soil which has been passed through a fine sieve for the surface. Cover with a slate until well germinated, when this should be removed.

The Conservatory.—No pains should be spared to keep this as attractive as possible at this season. Watering should be done early in the day, and the plants kept as tidy as possible. Give a circulation of air whenever the conditions outdoors permit. Gradually introduce supplies of forced bulbs for succession. Plants that have done duty and which are required for stock purposes, such as Salvias, Chrysanthemums and Eupatoriums, are best if neatly cut down and transferred to some suitable position and watered sparingly for a time.

Tree Carnations.—Continue to root cuttings of these if more are required. This is best performed by pulling the growths clean out with the thumb and forefinger when about three inches long, and inserting them in a fine and very sandy compost in a close greenhouse temperature, where they should remain until rooted. Then pot singly and stand on a shelf near to the glass. After they have recovered from the shift, neatly remove the points of the growths.

Cyclamen.—Assist these with properly-diluted manure-water at intervals, never allowing the plant to become thoroughly dry before doing so. Avoid pouring the water over the crown of the plant, and remove decayed leaves and flowers by pulling the stems clean out, not cutting them with a pair of scissors, which causes that portion left to rot.

Planting Fruit Trees.—While the present mild open weather lasts, continue to plant fruit trees. In the event of trees arriving during frosty weather, place them where they may thaw gradually. Avoid the use of too much manure when planting, a much too common mistake. No manure should be placed in close proximity to the roots. Where the ground is retentive, add some old mortar rubbish to render the soil more porous, and the addition of some good fibrous loam and bone-meal is an advantage. Plant as near as possible to the same depth as the tree was before and remove damaged roots with a sharp knife, always cutting from the under side and towards one's self.

Pruning.—This will soon be engaging the attention of the fruit-grower. Where much has to be done, make an early start.

Raspberries.—These will benefit if the ground be now cleaned, lightly forked up, and a mulching of good decayed farmyard manure applied.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Vines.—It is usual to begin the forcing of Vines and Peaches at this time, the fruit-houses having been unventilated for a week or two previously. Vines need not be given a day temperature of more than 55°, and at night, towards morning, a drop to a little below 50°. Syringing Vines to induce the buds to break is being disregarded by an increasing number of thoughtful gardeners.

Peaches.—About the same temperatures suit these, or a little less during the mornings. An exaggerated temperature induces the bursting of the leaf-buds too long before the flower-buds, to the detriment of the crop. It is essential that the borders be kept in a regularly moist condition, but not to waterlog them.

Tomatoes.—If not already done, seeds of an early-fruited sort should be sown at once, using for them a very light compost, such as loam two parts, leaf-soil one part, and sand one part. Moisten this thoroughly after filling the seed receptacles, scatter the seeds very thinly over the surface an hour subsequently, and just cover the seeds with a little of the same compost. Place a piece of dimmed glass over each pot and stand in the warmest house available. Nothing further should be needed till the seedlings are ready to transfer to boxes or small pots.

Hyacinths.—The earliest batch will now be flowering or nearly in flower. If placed in a fairly cool conservatory, very infrequent watering will suit; if in a warm one or heated apartments, they will need daily attention. Another batch should be in the forcing-pit, each covered with an inverted flower-pot, and with the growths 2 inches or so long. A third batch should be in a pit at about 50°. The third batch of Roman Hyacinths should be well advanced, and later lots will come on nicely in a temperature of 50°.

Tulips.—Our earliest lot was in bloom over a fortnight ago, the variety being Proserpine. Quite a number of varieties force from this date with facility. They ask for a high temperature till the colour shows, and should be covered as recommended for Hyacinths to draw up the stalks and foliage. Much diluted manure-water is appreciated, or just a pinch of sulphate of ammonia to the gallon may be substituted. This clears and deepens the colour of the flowers.

Narcissi.—Paper-White is the best for flowering at this date, the finer species and varieties resenting too early forcing. Potfuls of Victoria and Golden Spur that have the stalks advanced a few inches may safely be removed to a hothouse. Kept in the dark and fairly soaked with water, the stalks will lengthen almost immediately and the flowers follow quickly. To succeed these, more of the same kinds of *Telamonius plenus*, *Horsfieldii* and *Sir Watkin* should be coming on in an intermediate temperature.

Chrysanthemums.—There is still abundance of bloom to carry the supply over another few weeks. Exceedingly careful watering is necessary, else the stalks get weak. The greater portion of cuttings for next winter's plants should be taken, and mother plants that have done flowering disposed of so that space may be obtained for other plants.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE TOWN GARDEN.

Cutting Back Large Trees.—As a general rule, it is not advisable to plant trees that will grow to a large size in small town gardens. Some are, however, already growing in them, and in many instances their spreading branches interfere with the shrubs and smaller ornamental trees or block up the paths. Branches must then be cut off, and the present is a good time for carrying out the work. If possible, the branches should be so cut that their removal will not cause a big gap. Each branch must be cut off close to the main stem or trunk of the tree, so that the wound will heal quite clean.

Good Perennials to Plant Now.—These plants may be put in any time while the soil is fairly dry and the weather is open. The following kinds and varieties will do very well in town gardens and yield flowers from spring throughout the summer until late in the autumn: *Doronicum*, *Sedum spectabile*, *Aquilegia*, *Campanula carpatica*, *C. latifolia macrantha*, *C. muralis*, *Arabis* (single and double flowered), *Alyssum saxatile compactum*, *Achillea Eupatorium* and *A. The Pearl*, *Anemone japonica alba*, *Centaurea montana alba*, *C. m. rubra*, *Chrysanthemum maximum*, *Delphiniums* in variety, *Geranium armenum*, *Helenium superbum*, *H. pumilum magnificum*, German Irises, *Lychnis chalcidonica*, *Mallows*, *Phlox* in variety, *Asters* (commonly called Michaelmas Daisies), double and single flowered *Pyrethrums*, *P. uliginosum* (white) and the variety *roseum*, *Rudbeckia Newmanii*, *Scabiosa caucasica*, *Solidago canadense*, *Spiraea Aruncus*, *S. palmata elegans* (where the soil is naturally moist), *Statice latifolia*, *Tritoma corallina*, *T. Uvaria* in variety, *Veronica longifolia subsessilis* and *V. elegans*. To these may be added border Chrysanthemums.

Cleaning Hedges.—Division and boundary hedges should always be well cared for. Very often they are overrun by long, coarse grasses and weeds, and then their appearance is unsightly. Furthermore, the hedge plants do not thrive as well, and neat fences of this kind set off to advantage flowers and other plants within their bounds. The present is a good time for the clearing away of all weeds and foreign matter found at the base. Hedges are rarely fed with any manures. Of course, it is not advisable to induce a gross growth, but a consistently healthy one cannot be had unless assisted by manure and good loam annually after about six years from the time of planting.

Pyrethrums, Polyanthuses and Primroses.—The single-flowered *Pyrethrums* are more suitable for town gardens than the double ones, although the latter grow and flower fairly well. The clumps possess roots in abundance, and they penetrate the soil very deeply, going almost straight down. So to be successful with these plants the soil must be deeply dug or trenched to a depth of about two feet. Some of the choice strains of *Polyanthuses* and *Primroses* often fail during the winter months, while the coarser strains are rarely harmed. If the large leaves turn yellow, the cultivator must carefully examine the plants and, while the soil is dry, press it firmly with the hands around the roots, and also carefully remove any soil that has lodged in the centre of the plants, as it often causes the whole plant to decay.

TOWN GARDENER.

THE BEST ANNUAL FLOWERS FOR LATE DISTRICTS.

THE time has now arrived for the ordering of the different seeds for the garden, and as many amateurs, and not a few professional gardeners, are sometimes at a loss to know just what is likely to succeed in their districts, a few notes on annuals, hardy and half-hardy, may, I hope, be of service to some of the readers of this journal who are in any doubt on the subject. My notes are based on an experience of seventeen years in one locality, so the information may be relied on. Several of the kinds mentioned are really perennials, but invariably give the best results when treated as annual plants.

Antirrhinums.—Few plants have come more to the front for bedding purposes during the last six or seven years than the homely Snapdragons. That they have been wonderfully improved goes without saying. While all sections are useful in their way, I much prefer the intermediate, as they flower profusely and are less formal than the dwarf kinds, while they require no staking. The shades of colour are now so varied that all tastes may well be satisfied. Particularly good are Barr's Queen of the North (white), Barr's Yellow, Barr's Scarlet, Sutton's Deep Crimson, Sutton's Fire King, Sutton's Carmine Pink and Sutton's Bright Crimson. Sow the seeds in heat about the end of February.

Nemesias.—I have grown these gorgeous flowers for about fifteen years, and consider them the finest of all dwarf annuals. They succeed in all kinds of seasons, and in this district, at all events, no other plant can give such a display in beds or borders. The large-flowered, or Suttoni section, is the more brilliant, but Sutton's dwarf hybrids are much preferred for bedding, as the plants are more floriferous and branch out beautifully. Many fail with these fine flowers by sowing too early and in too high a temperature. Give only very moderate heat to germinate the seeds; never more than 60°. The seedlings are rather tender at first, but as soon as they are pricked off they manage to gain strength.

Dimorphotheca aurantiaca.—I have grown this for three successive seasons, and it gives a very fine display. Sow the seeds during the first half of March and treat just like China Asters.

Double-flowered Pot Marigold.—This I find gives a great display in large beds. Treated like a half-hardy annual, the blooms are much larger and more double. Sutton's Orange King is very fine.

Stocks.—The East Lothian Stocks, if sown in heat not later than the middle of February, give much more satisfaction than the Ten-week kinds. Forbes' or Methven's strains are probably the best to be had anywhere.

Mimulus.—Sutton's Giant Mimulus, treated as a half-hardy annual, gives a wonderful display on a damp north border. Sow in March and treat just like Asters.

Nigella.—A grand hardy annual, the variety Miss Jekyll being the best, both as regards size and colour. It is best sown thinly during the last half of April where it is to bloom.

Candytuft.—The large white Spiral Candytuft makes a very fine bed, and blooms for a much longer season than the older varieties.

Lupines.—Sutton's atrococcineus is by far the best of the annual Lupines here. Sow where they are to flower towards the end of April. Thin out well.

Shirley Poppy.—A good strain—we grow Barr's—makes a very effective bed and blooms for a long season.

Nemophila.—This homely little annual flower is much admired when sown in a large mass. Must be well thinned while still in a small state.

Eschscholtzia.—One of the best flowers for dinner-table decoration in small vases if picked when only half open. Carter's Carmine King and The Mikado are fine, as is Mandarin. Sow on poor soil.

Mignonette.—Barr's Covent Garden Favourite is a giant Mignonette with a delicious scent. It blooms for a long period if sown on good soil in which some lime rubbish has been mixed. Thin to 9 inches apart.

Malope.—This annual is very effective in large beds or as clumps, and is excellent for cutting.

It is a mistake to sow hardy annuals too early in late, cold gardens, as slugs do so much harm when growth is slow. The last half of April and the first week in May I have proved to be best suited for this locality.

Preston House, Linlithgow.

C. BLAIR.

NEW CARNATIONS.

THE following Carnations were registered by the Perpetual Flowering Carnation Society from January 1 to December 31, 1911, and the raisers' names (colours and descriptions as received from the raisers) are given: Afonwen, seedling, pink ground overlaid with mauve; W. J. Smith. Atmah, seedling, salmon red; C. Engelmann. British Triumph, seedling, brilliant crimson; C. Engelmann. (This variety was originally registered as Triumph, but as it has since transpired that the name was already appropriated in America, the variety has been re-registered as British Triumph.) Cheltonia, seedling, red; Young and Co. Constance, seedling, white, very heavily lined with pink; Bertie E. Bell. Coronation, seedling, soft light pink; Bertie E. Bell. Fairmount, origin, California, heliotrope; Allwood Brothers. Frank Godding, seedling, deep cerise; F. W. Godding. Hon. Lady Audley Neeld, seedling, rich carmine with white margin; Young and Co. Judith, seedling, pure white; Bertie E. Bell. La Rayonnante, origin, France, yellow; Allwood Brothers. Lady Fuller, seedling, warm salmon; Charles Wall. Lady Northcliffe, seedling, clear salmon pink; C. Engelmann. (This variety was originally registered Ar, which name is herewith cancelled.) Mandarin, seedling, orange yellow, marked cerise pink; H. Burnett. Mrs. F. C. Raphael, seedling, cherry red; H. Burnett. Mrs. F. C. Harwood, seedling, purple; F. C. Harwood. Mrs. Greswolde Williams, seedling, pink on opening, develops to a soft mauve; Young and Co. My Favourite, seedling, clear shade of old rose pink; Stuart Low and Co. Pluto, seedling, brilliant velvety crimson; H. Burnett. Princess, seedling, pure glistening white, lightly striped pink; C. Wall. Queen, seedling, yellow ground, light pink markings; Young and Co. Queen Mary, seedling, pale pink; A. Smith. Salmon Britannia, sport, salmon pink; W. H. Page. Sultan, seedling, crimson; H. Burnett. Sunstar, seedling, deep yellow, with few pink stripes; C. Engelmann. Una Wallace, seedling, bright cerise; W. E.

Wallace. White Chief, seedling, white; H. Burnett. Wivelsfield Wonder, origin, America, white, marked delicate rose pink at edge of petals Allwood Brothers. Correspondence regarding registration of varieties should be addressed to the secretary to the floral committee, Mr. Hayward Mathias, Lucerne, Stubbington, Fareham, Hants, and correspondence regarding membership and shows to Mr. E. F. Hawes, Ulysses, Fortune Green, London, N.W.

THE APPEAL OF GARDENING.

OF all pursuits under the sun, gardening must be the most absorbing and the most catholic for all who put their backs and brains into it. Why? I am going in for Tulips, and I want to know just a little about them. Well may flowers smile! The Pied Piper of Hamelin town smiled because he knew his power. Is it thus with flowers? I wonder! I only know that to grow good Tulips I have to know all about soils and manures; to keep them in robust health I have to learn a lot about certain low-born plants that will come and live on my favourites if they get half a chance; to take anything like an intelligent interest in their past I must, by way of a start, master Dutch and Turkish; to know how to group them in my garden or to describe them in THE GARDEN I am called upon to be a second Rubens; and so on *ad infinitum*.

Again, I have a fancy to take up the history of gardening or gardens. I get together many old books, Johnson, Parkinson, Gerard, Holland's Pliny; but I very soon find that garden history outcatholics Vincentius with his "quod ubique, quod semper, quod ab omnibus."

At all times! It goes beyond time. We go from Wilton, Versailles, Theobalds, Nonesuch, to the hanging gardens of Babylon, and beyond them again to the Elysian Fields and the gardens of the Hesperides and Adonis.

Everywhere! I should think so. "Mrs. Wigg's Cabbage Patch," "Mary's Meadow," Chambers' Chinese Pagoda at Kew, the Dutch garden here and the Italian garden there, the moraine at Wisley, the English garden in France, the Fuchsia and the Geranium in the cottage window, the Orchid in the palace. Truly ubique! Gardening, indeed, is like Nature; it abhors a vacuum.

By all—yes indeed, as they say in Wales.

Read such a charming book as "The Praise of Gardens," by Albert F. Sieveking, to learn of the past. And for the present have we not genetic conferences and Gooseberry shows? Children still sowing Mustard and Cress on wet flannel, and learned men experimenting with carbon dioxide and trying to fathom the mysteries and the mixtures of hybridisation? Magnificent libraries being collected, like Miss Willmott's and Arthur Paul's, or, on a still larger scale, those of Boston and Paris? Old-time florists like Bentley and Horner, and would I could still write James Douglas? Modern Orchid kings like Colman, Holford and Gurney Fowler? A National Rose show side by side with a National vegetable show? Great hybridisers like Eckford and Engleheart? Great scientists like Bateson, Hall and Elwes? Garden artists like Miss Jekyll and William Robinson? Splendid cultivators like Moore, Beckett, Gibson and Hudson? Huge commercial establishments like those of Sutton,

Veitch and Vilmorin? Daring travellers like Forrest and Wilson? Famous writers who, being dead, still speak, like Baltet and Burbidge? Magnificent organisers like Wilks and Theodore van Waveren? Specialists in every branch, Dykes and Iris, Bowles and Crocus, Harman Payne and books, O'Brien and Orchids, Barr and Daffodils, Bunyard and Apples, Ellacombe and flower-lore, Druery and Ferns, Douglas and Auriculas, Hill and Carnations and, literally, hundreds of other workers of less or greater fame and success? "Some born to blush unseen," potential and possible Mendels. Who knows? Others "si monumentum quæris, circumspice." You can see their work. Great patrons and humble toilers, for

There's not a pair of legs so thin, there's not a head so thick,
There's not a hand so weak and white, nor yet a heart so sick,
But it can find some needful job that's crying to be done,
For the Glory of the Garden glorifieth every one.

And some can pot begonias and some can bud a rose
And some are hardly fit to trust with anything that grows,
But they can roll and trim the lawns and sift the sand or loam,
For the Glory of the Garden occupieth all who come.
—R. KIPLING.

Rightfully may gardening be called catholic. No King of Spain can gainsay the appropriateness of this appellation.

Postscript.—Like in many a letter, here comes the point. As far as gardening is concerned, I do not think we can, any of us, be too catholic in our sympathies, although, if it is not our bread and butter, some may become too much absorbed in its pursuit.

I have lately been down some of the out-of-the-way bypaths and in the almost unknown regions of the great world of horticulture. I have found the Barometz and seen the Goose Tree (at least in a picture). I have read the immortal Philip Miller's very own handwriting. I have handled rare old books on flowers and fruits. I have studied the Tulip. And now, with the kind permission of the Editor, I am going to try to touch a responsive chord in readers' hearts and to give them possibly an added interest in this ancient art. In the course of the next few weeks I propose to draw the curtain partly aside and tell of what I have seen and found.

The historical side of horticulture and the quaint ideas of the past may not possess any great intrinsic value in themselves, and may only appeal to dreamers of dreams; but, all the same, they have the power of giving infinite pleasure and enjoyment to all who hear and follow the call. The sleep of winter is over our gardens. Some of us have no glass-houses full of Flora's gems, but we all have an arm-chair, and in that we can sit and read books, large and small, old and new, that transport us to a nearer or remoter past and enable us to picture the days of yore.

Flora, her jewels doth expose:

... bids you pick and choose;
Come boldly on and your collection make,
'Tis a free gift, pray wear them for her sake.
—From the Mind of the Frontispiece in "Ray's Flora," 1665.

JOSEPH JACOB.

"My Garden Diary for 1912."—This is the title given to a dainty booklet sent out by Messrs. Sutton and Sons. It is bound in stiff coloured paper covers, and contains a calendar with reminders on garden work for each month and ample space for memoranda. This is a delightful little diary that is both artistic and useful.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PRIMROSES FAILING (H.).—You had better leave your Primroses alone at the present time. It is quite probable they will improve in health as the days get longer, whereas if you disturb them now it may do them harm. May is a good time to sow Primrose seeds out of doors. Transplant your Primroses as soon as they have flowered.

ABOUT POLYGONUM BALDSCHUANICUM (T. J.).—Polygonum baldschuanicum is a hardy climber from Bokhara. It grows at least 20 feet high, and is suitable for planting at the foot of a bush or low tree, such as a Holly or Pine, over which it may ramble at will. Loamy soil is suitable, and, after it is once established, all the attention required is to see that the main branches grow in the right direction, and prune away the dead ends of the branches in spring. There is no necessity to cover it in winter, in the Southern Counties at any rate. A south, east or west aspect suits it, south and west perhaps being the most desirable. It blooms freely during summer, the flowers being white.

ROSE GARDEN.

RAMBLER ROSES WITH SHOWY CLUSTERS OF BLOSSOM (J. C. H.).—Four good kinds, different from those you possess, would be Mrs. F. W. Flight, American Pillar, Excelsa and Newport Fairy.

ROSES FOR TRELLIS (E. T.).—Twelve good varieties would be American Pillar, Excelsa, Edmond Proust, Alberic Barbier, Hiawatha, Dorothy Perkins, Ruby Queen, René André, Evergreen Gem, Gardenia, Lady Godiva and Leontine Gervais.

FREE-FLOWERING RAMBLER ROSES (J. C. H.).—Good additions to those you already possess would be Lady Godiva, Minnehaha and Excelsa. Three good well-formed Hybrid Teas of a yellow or cream shade are Joseph Hill, Melanie Soupert and Mrs. Aaron Ward.

ROSE REINE MARIE HENRIETTE (B. D. G.).—This beautiful 'old Rose, sometimes known as the red Gloire de Dijon, succeeds best away from a wall or fence. Grow it well out in the open over an arch or up a pillar, or even as a free bush without any support, a form of growth well suited to many of the climbing Tea and Hybrid Tea Roses. It has a great tendency to mildew, so that by planting upon a wall or fence this is aggravated. A good Rose for your tarred fence with north-east aspect would be Aimée Vibert or Zepherin Drouhin or Conrad F. Meyer, only you must take care to secure the growths well so that they do not lacerate each other by swaying about in the wind.

FRUIT GARDEN.

PEACH AND NECTARINE TREES ON THE BACK WALL OF A VINERY (F. P. M.).—The Peach and Nectarine trees to grow there successfully require as much sunshine and light as does the Vine. They would do no good whatever on the back wall of a vinery under the shade of the Vines. You would do better with Figs. They can be made to bear fair crops under such conditions.

CORDON APPLES (J. G. W.).—Seeing that your soil is good, there is no reason why cordon Apple trees on the Paradise stock should not succeed well in such a position. Pears and Plums would, no doubt, be more at home there, but we should have no fear of Apples not doing well so long as the right sorts were planted and watering was attended to in dry weather. They would be none too near the building at 12 inches, and we should prefer a timber trellis to tie them to rather than galvanised wire. Take away a little of the old surface soil from over the roots of the trees, replace it with fresh loam, after mixing a small quantity of bone-meal with it (say, a handful to a peck of soil), place a dressing of decayed manure over the surface soil 3 inches deep as far as the roots extend, leaving it on until the end of April, and then give another fresh dressing for the summer months. This will conserve the heat and moisture and encourage the growth of surface roots.

PEACH SEA EAGLE (W. M., Germany).—The tree of this variety is very hardy. It is also a robust grower and a regular and good cropper. The fruit is large, of a pale lemon green colour, with minute red spots. Its flesh is of a pale green colour, flushed with red near the stone. Its flavour is only second-rate. It is valued chiefly in this country for its hardiness and its heavy cropping qualities, and also for its large size. It is a favourite with market-growers, and is largely grown out of doors on south walls in many parts of England. The variety is a late one.

APPLE TREE FOR AN EAST WALL (M. B.).—The aspect, of course, is not a good one, although it is slightly east by south. For an October Apple we think King of the Pippins is excellent. The tree is of strong constitution, a good healthy grower and a fairly constant bearer. The fruit is handsome and of good quality. Cox's Orange Pippin is a better-flavoured variety and ripe about the same time, but it is very subject to canker, and would be disappointing in the position. If you prefer a later Apple, say, ripe at Christmas, Hibberd's Pearmain is one of the best. The trees should be on the Paradise stock.

KEEPING APPLES AND PEARS (J. G. W.).—If you can devote one end of the galvanised shed to the storing of your fruit it will answer very well. You will have to thatch the roof and the sides with Ling (Heather) or Rye straw thatch quite 1 foot thick, and also that portion which may be exposed inside the shed. There must be means of ventilation when the weather is warm. This could be stuffed up with straw in cold weather. You would find that this thatch would keep the place cool in summer as well as warm in winter. A temperature during winter of from 43° to 46° Fahr. should be aimed at, but the fruit will receive no harm if the temperature for a short time falls a degree or two below 40° occasionally.

PLUM TREES NOT BEARING (M. C.).—If your trees are healthy and have made a free growth, the best thing for you to do will be to take these up and replant, adding a liberal quantity of new turfy loam to the soil, cut back all the strongest of the roots by one-half their length, and also cut off the top ends of the other roots. Let the cut be slightly slanting, and on the top side of the root. This will result in a multitude of small, fibrous surface roots being formed, and which in turn in due time will help to produce fruit-bearing branches. On the other hand, if the trees are weak and sickly, the best way will be to grub them up and plant others. Should you root-prune the trees as suggested, do not replant the trees too deep. The top roots should not be more than 5 inches below the surface. Tread the soil very firm after planting, and give the surface of the soil over the roots a dressing of well-decayed farmyard manure 3 inches deep. The swelling of the stem as indicated in the sketch you send is the result of grafting scion and stock, and is of no consequence.

THE GREENHOUSE.

HYDRANGEAS IN POTS (S. E.).—Hydrangeas in pots, whether young or old, should be given enough water to keep the soil moist. Of course, they do not require anything like the amount they do during the growing season, but at no time must the soil become parched. Provided the plants are well shaped, they will not need cutting back, as by so doing you run a considerable risk of a lessened flower display. Still, if the plants are crowded, a few of the weaker shoots may be thinned out before the plants start into growth in the spring.

GREENHOUSE CLIMBERS (Miss C. C.).—If you exclude Clematis indivisa there are very few kinds of Clematis which are suitable for your conservatory, and other kinds of climbers would doubtless give greater satisfaction. You might, however, try C. meyeniana and C. lanuginosa varieties Fairy Queen and Lady Caroline Neville. Passiflora Munroi and P. racemosa would probably give satisfaction as far as Passion Flowers are concerned. The former is the stronger grower; the latter requires the warmer position. We should, however, advise you to try the following four climbers: Passiflora racemosa, Lonicera sempervirens, Rhodochiton volubile and Bougainvillea glabra var. sanderiana. The Passiflora requires the warmest position, and your temperature may be too low for it.

CYCLAMEN AND GRUBS (Mrs. C.).—The grubs which have eaten the roots of your Cyclamen, and are now in some cases attacking the corms, are the larvæ of one of the many weevils which are, as a class, so destructive to vegetation. The perfect beetles feed on the leaves of many species of plants, and, being nocturnal feeders, they are often overlooked until they have done a considerable amount of damage. These beetles lay their eggs in the surface soil of pot plants, and, when these eggs hatch, the future beetle makes its appearance in the shape of a small whitish grub. It is very voracious, and quickly commences to feed upon anything ready to hand. The grub quickly increases in size, and, consequently, in destructive powers. To check the trouble the perfect insects must be caught, and that is not altogether an easy matter, as not only do they feed at night, but they also drop suddenly to the ground when surprised by a bright light or by the shaking of the plant upon which they are feeding. It is, therefore, a good plan to place a white sheet, or paper of that tint, underneath the plants, so that when they drop they can readily be detected and killed. As the eggs may be in the potting compost, it should be sterilised before using, or fresh soil from quite a different source should be obtained. In any case, the damage seems to be too great to expect many flowers this season.

THE GARDEN.

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JANUARY 20, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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NOTES OF THE WEEK.

Pelargoniums in the Open in January.—As evidence of the remarkable mildness of the present winter, it is worth recording that on Sunday, the 14th inst., plants of ordinary bedding Zonal Pelargoniums were noticed in a window-box in an Essex garden. These were only sheltered from cold winds and had not been given any protection from frost. The plants were quite healthy and making a number of new growths.

Plant-growing with the Cooper-Hewett Lamp.—The experiments carried on by Miss E. C. Dudgeon at Lincluden House, Dumfries, in the growth of plants by the aid of the Cooper-Hewett Mercury Lamp, a report of which appeared in the last issue of the Journal of the Royal Horticultural Society from the pen of Professor Priestley, are being continued this winter. At the request of Miss Dudgeon, the Dumfriesshire and Galloway Natural History, &c., Society appointed two of the members of their council—Mr. S. Arnott, F.R.H.S., and Dr. J. W. Martin, M.D.—to visit the experimental station and to check the records periodically.

One Thousand Pounds for Sweet Peas.—This year the munificent sum of £1,000 is being offered in cash prizes for Sweet Peas by Mr. Eckford, the well-known Sweet Pea specialist. The amount is divided over five classes. The scheme caters for the cottager as well as the amateur employing one or more gardeners. One class is open to professional gardeners, and another to boys or girls under sixteen years of age. All entries must be posted to Wem on June 26, 1912. Full particulars of this great competition may be had from Mr. Henry Eckford, Wem, Shropshire.

Water Gardens in January.—Anyone possessing a water garden, Lily pond or Lily tank, whether it be large or small, would do well to remember that the present is a good time to clean it out and overhaul the plants in preparation for the season of growth. The smaller the pond or tank, the more need is there for attention, and everything in the way of mud and weeds should be removed. Plants which have become too large for their places may be carefully divided, taking care in the case of Water Lilies to retain one or more strong crowns for each clump. The opportunity may be taken of giving fresh soil. Turfy loam is the most suitable material, but it may have a little well-rotted manure mixed with it. Either build the soil into mounds, which may be kept in position by a surrounding layer of whole turves, or place it in baskets. Replant as soon as possible, and do not allow the water to remain out of the pond any longer than is absolutely necessary.

Thalictrum dipterocarpum.—During recent years numerous subjects have been introduced from China, but few will become more popular than this attractive species. It is the finest of all Thalictrums, the inflorescence attaining a height of 4 feet or 5 feet, and the general habit is extremely graceful. The individual flowers are rose purple in colour, with many citron yellow anthers, and when grown in a mass or even in clumps it looks very attractive on account of its elegant growth. It is also useful for decorative purposes in the dwelling-house, because it will remain in perfection for several days in a cut state. Seed is now offered, which should be sown directly it is received in a well-drained pan of light soil and kept in a cold frame till the seedlings are sufficiently large to plant out in the open border. An open, sunny position should be chosen, but a rich soil is not recommended.

An Interesting Japanese Tree.—Anyone seeing *Cryptomeria japonica elegans* for the first time in midwinter, and then not again until summer, might be excused if he thought that he had seen two distinct trees, for summer and winter conditions differ to a remarkable degree. In summer the plumose branches are covered with pale green leaves, whereas by winter the foliage has turned to a deep bronze or purple. This change comes about gradually, commencing during early autumn, and as spring arrives the colour changes back to green. In whichever condition the tree is noted, it claims attention as a likely decorative subject. It has a fault, which is rather a serious one, for it is liable to be blown about badly by wind. When planting it is advisable, therefore, to give it a well-sheltered place. It is a variety of the common Japanese Cedar, which is one of the most important of Japanese timber trees.

The Butcher's Broom Fruiting.—On several occasions of late, examples of *Ruscus aculeatus*, commonly called the Butcher's Broom, have been seen covered with bright red fruits and making a more effective display than some of our choicer fruiting shrubs. It is unfortunate that fruiting plants are not more often found in gardens, for it is a common complaint that plants under cultivation bear fruit less satisfactorily than wild ones. The reason for this is probably that the plants have been increased by division, and have all, in a certain garden, or perhaps district, sprung from one original plant. This would mean that all were either male or female plants. When this is ascertained to be a fact, the introduction of a few specimens of the opposite sex would doubtless result in the plants fruiting as freely as they do in a state of Nature. The fact of the Butcher's Broom being able to exist and thrive in shady places, together with its showy character when in fruit, warrants anyone going to a little trouble to secure both sexes.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The National Rose Society and Amateurs.—I quite agree with "W. M." that every inducement should be given to new members to become competitors at the shows. I should like to see classes similar to those at the Botanic Show (for new members and beginners) at the provincial and autumn shows. Much has been said against Roses shown in boxes, but we find that visitors "go for" these first and the so-called garden Roses last.—G. S.

The Variegated Rock Cress.—Is there not some confusion in describing the yellow variegated form of *Arabis* as *albida*? The forms of the true *albida* are known by their rough tomentose or hairy foliage, and I know of no yellow variegated form of it. The variegated variety, which has yellow-edged leafage and is common in gardens as *Arabis lucida variegata*, is a native of Hungary, whereas *albida* comes from the Caucasus. *Lucida* is much dwarfer and more compact in habit, has glaucous, shiny leafage, and cannot be confounded with *albida*. The typical form of *lucida* is seldom seen. The yellow-edged form makes a good summer edging plant, but it does not appreciate disturbance.—A. D.

Euphorbia Wulfenii.—I was most interested to read Miss Jekyll's note on *Euphorbia Wulfenii*. I had noticed in a clump of this plant here that the point of every shoot was crooked downwards last autumn, and was at a loss to account for this, for, so far, I have not flowered this plant, so had not the opportunity to note this characteristic. It is a pleasure to anticipate the flowering of this *Euphorbia* after some years of disappointment. These plants are in a high position at the back of the rockery, and were supplied in the autumn of 1906 from Munstead Wood to Lady Northbrook. They now form a fine clump fully eight feet through and over three feet high. Of a certainty it shows that this plant requires a thorough scorching before it will flower. We have another clump of smaller plants that are in a moister position with a western aspect. They have been in their present position two years. These also have every shoot crooked.—E. HENDERSON, *The Gardens, Stratton, Micheldever*.

— I was greatly interested in Miss Jekyll's note upon this beautiful plant. The oldest specimen growing in the botanic garden here promises to be a grand sight during the coming spring. I have not, however, suffered the disappointments with it which Miss Jekyll has experienced, as every year during the past seven it has borne flowers in considerable numbers, with the exception of last spring. Now, however, many shoots, which in the ordinary way would not have bloomed until another year, are showing flower, and altogether there must be quite 150 shoots all promising to flower. This is a plant which is well worth growing, even if it never flowered, for its handsome foliage and stately appearance. I have plants in full sun and in shade, and they do equally well in both places. They seed freely, and young seedlings quickly develop into good specimens. One I planted a year last autumn is now showing from thirty to forty flowers. I invariably cut away a proportion of the old flowering shoots each year. This keeps the plant shapely and ensures a plentiful supply of young shoots from the base.—J. D. HALLIBURTON, *Victoria Park, Bath*.

Spring Cabbage.—It is not often one has the unusual experience of cutting the first spring Cabbage on January 1. This was our experience this year. Seeds of Ellam's Early Dwarf were sown about the middle of August, the first Cabbage being cut on January 1. The heads were of fair size and of splendid quality.—H. R.

Evergreens for Town Gardens.—Your correspondent J. C. Wadd deals so exhaustively with this subject in *THE GARDEN* for December 30, 1911, as to leave but little to be said on the matter. Some of the plants named I, however, could not keep alive in London, where in an orthodox back garden, or glorified courtyard, I in the course of years tried a great number of different shrubs. Those of a deciduous nature gave one a considerable choice, but the difficulty was with the evergreens. Of these the first place must be given to two Japanese shrubs, namely, *Aucuba japonica* and *Fatsia japonica*, known more generally as *Aralia Sieboldii*. The *Fatsias*, which had really become too tall for indoor decoration, were planted out, and now after six years they form a really striking feature and have flowered freely. The stout, leathery nature of their leaves enables them to resist the sulphur-laden fumes of London better than anything else except the *Aucubas*. Green-leaved *Hollies* do fairly well, the Golden *Privet* loses its leaves early, the Japanese *Euonymus* is eaten up with caterpillars, the *Laurel* looks miserable, and so do the evergreen *Barberries*. The small *Periwinkle* grows freely, but the large one quickly dies out. A deciduous shrub that will thrive right in the heart of London and is well worth growing for its handsome leafage is the *Fig*, which is not mentioned by your correspondent.—H. P.

The Royal Horticultural Society's Daffodil Show.—The amended schedule has now been published, and is to be obtained on application to the Secretary, Vincent Square, Westminster. Everyone who intends to compete should send for a copy. The meaning of "in commerce" is defined. A very necessary proviso has been added, viz., that all flowers shown for competition "must have been actually grown by the exhibitor." The regulation about naming has been watered down. Staging arrangements have been incorporated with the "Regulations," and competitors are required to select the section in which they will enter and confine their entries to that one only. With these alterations and additions I think this second edition will commend itself to everyone; and although minor improvements might be suggested, on its broad main lines it should be found to be a good workable schedule. I must, however, say that I regret that there is no limitation of prices in Section 3, which is intended for small amateurs. "Agricola," who says he writes from an amateur's point of view, calls this, in last week's issue of *THE GARDEN*, "a ridiculous plan"; but when a man has "hundreds of seedlings" (many presumably good enough for showing), he certainly should be debarred from trying to sweep the board in the small men's section. From all I have heard I do not think there are many amateurs or traders who would agree with him. He obviously writes from the standpoint of an old hand with plenty of seedlings. Such can take care of themselves. The man most of us want to encourage is the beginner with very likely a slender purse, and who a short time back had neither seedlings nor varieties. We have now a good schedule; let us hope we will have a good show. Please note the date—April 16 and 17.—JOSEPH JACOB.

Hares Eating Trees and Carnations.—Can you or any of your readers suggest some method of preventing hares from eating Apple trees, Carnations and Rose trees, as they have made great havoc among mine? The greater part of my garden is wire-netted, but some of it it is impossible to wire. I can find no remedy, and many of my trees are destroyed.—C. R. L.

The Winter Jasmine.—I saw in *THE GARDEN* for January 6 some notes on the winter-flowering *Jasminum nudiflorum*. I notice how beautifully it is flowering on the walls of the cottages, but the cottager will persist in pruning the *Jasminum* with the shears. Now, I think this is a great mistake, as it spoils the natural habit and beauty of the plant. If left unpruned it makes a brave show at this season of the year, and is so useful, its long yellow sprays of flowers being excellent for table and decorative purposes.—WILLIAM DRIVER, *Stonehouse, Gloucestershire*.

A Proposed Rose Conference.—As there are likely to be a large number of foreign rosarians visiting the International Horticultural Exhibition in May next, would it not be a suitable opportunity to have a conference under the auspices of the National Rose Society? for surely this society is more fitted to conduct such a conference than the Royal Horticultural Society. If this suggestion meets with the approval of rosarians, it is not too soon to be thinking about the details and inviting our brother Rose-growers from other countries to prepare papers for discussion.—WALTER EASLEA, *Eastwood, Essex*.

Hydrangea paniculata.—A fact not generally recognised is that this *Hydrangea*, so well shown on page 5 of *THE GARDEN*, is difficult to obtain from nurseries. Its variety *grandiflora* may be bought by the thousand, but the typical *H. paniculata* is, as a rule, ignored. While the variety *grandiflora* is not likely to be dethroned from its position as a desirable subject for pot culture, the typical kind makes the most attractive bed, at least from my point of view. The lover of huge flower-heads will still vote for *grandiflora*, from which the typical kind differs in being more vigorous in growth, while the leafage is denser and of a deeper green. The most important feature, however, is to be found in the inflorescence, as the flower-heads contain a number of fertile blossoms, over which the large, showy, sterile ones are plentifully scattered.—P.

Camellias as Outdoor Shrubs.—I have for many years been much interested in the cultivation of *Camellias* as shrubs and wall plants in the open air, and was pleased to see the article by Mr. W. A. Cook in your issue of January 6, page 3. Your correspondent says that the single Japanese variety, *C. Sasanqua Mikiniki*, flowered freely at the end of November. I recently saw some beautiful bushes of this section loaded with buds, but they would not open before February. In a Hampshire garden there are some magnificent specimens growing in the form of bushes on a lawn sloping to the south, with a protection on the north and east afforded by an old ruin and some conifers. These *Camellias* are from 12 feet to 15 feet high, in a most healthy state, and flower freely. The soil is gravel, sand and peaty loam. In another part of the same county I had charge of many plants growing on north walls. They flowered freely and escaped injury by frost in some seasons, but were discoloured in others. In one place—against a north wall—always in shade and very gloomy, the plants did well, but never flowered.—B.

A Plague of Ants.—We have been pestered here with a species of ant which is probably of foreign origin, and which, no doubt, is brought into this country with importations of plants and other things. Their habits are quite unlike the kinds usually found in this country, and when once they get established they are very troublesome and exceedingly difficult to get rid of. They breed at a very rapid rate, which necessitates their finding fresh places for the new queens to establish their nests. In this manner they will quickly take possession of the whole place if they are not checked. They are very objectionable indeed in dwelling-houses, where they will attack all kinds of foodstuffs. We tried all the methods usually adopted for destroying ants without making the slightest impression, when we were recommended to try the Ballikinrain Ant Destroyer. This we have used with excellent results, and the pest is now practically cleared. I have been tempted to pen this note for the benefit of other readers of THE GARDEN who may be troubled with this pest.—E. HARRISS, *Royal Gardens, Windsor*

Planting Apple Trees.—The oft-repeated advice to plant Apples, or, in fact, all fruit trees at the same depth as they have been growing in the nursery is, in the majority of cases, the right course to follow. I do not believe in shallow planting—that is, leaving some of the largest top roots barely covered—even in wet situations. It is much better to drain the land and plant at a moderate depth. In dry soils and climates it is all the more important to induce deep rooting. I am aware that there may be a danger of the roots reaching down to an unsuitable subsoil if the sites have not been specially prepared; nevertheless, it pays to prepare a good depth of soil suitable for the tree before planting. This may be done by digging out the stations some time beforehand and either removing the subsoil altogether or, if it is practicable, adding some of the top soil with mortar rubbish, charcoal, burnt clay or garden refuse, mixing all together and allowing it to lie exposed until the time for planting. By this means a suitable rooting medium is secured for Apples on the Paradise stock. Trees on the Crab or free stock, which produce strong, downward roots, must have a greater depth of soil than is needed for those on the Paradise stock.—COLIN RUSE, *Rush, County Dublin*.

The Paris Wallflower.—Why is it one never hears of this kind of Wallflower being grown in England? It certainly cannot be because it is unworthy, and being so well known on the Continent it goes without comment; nor can it be that there are so many winter-flowering subjects, for there is always room for a Wallflower in the spring, and therefore there must be room earlier in the year. In many gardens this variety should prove a welcome and valuable addition. When living in Cape Colony, this was the only Wallflower that would flower. It was grown as an annual,

flowering within four months of seed-sowing, the seed always having been obtained annually from France. The plant under notice begins to bloom during the late summer from seeds sown in March or April in gentle heat, and continues to do so throughout the autumn and winter, and during such mild weather is beautiful and delightfully fragrant.—H. R., *Twickel, Holland*.

Camellia japonica magnoliæflora.—Undoubtedly this Camellia ranks among the best of the semi-double varieties raised during recent years, and when it becomes better known cannot fail to find a place with lovers of these old-fashioned plants. The flowers when opening are of a delicate pale rose colour, but with age become almost white. The petals, which number from twelve to fifteen, are narrow and more erect than in any other Camellia, this character in a fully-expanded flower



THE NEW MAGNOLIA-FLOWERED CAMELLIA: C. MAGNOLIÆFLORA.

giving it the resemblance of Magnolia conspicua. This Camellia is now flowering in the Temperate House at Kew; the plant is about 4 feet high, on which there are between thirty and forty expanded flowers and buds. It was obtained as a small plant some five years ago from the well-known nursery of Mr. T. Smith of Newry.—W. T.

FORTHCOMING EVENTS.

January 23.—Royal Horticultural Society's Exhibition at Vincent Square. Lecture at 3 p.m. by Mr. H. Morgan Veitch on "Horticulture and the Proposed Taxation of Land Values."

January 24.—Royal Botanic Society of London Meeting.

January 25.—Manchester Orchid Society's Meeting.

THE ROSE GARDEN.

THE BEST ROSES FOR TOWN GARDENS.

WITH the advent of a more sturdy race of Roses, which distinguishes our present-day Hybrid Teas, the town-dweller need have no fears as to the practicability of growing some good Roses even within the sound of Bow Bells. The publication of gardening papers like THE GARDEN has so educated the enthusiast in the matter of soil preparation that one of the stumbling-blocks has been removed from his path.

Preparation of the Soil.—It is all right when the amateur takes the work in hand for himself; but when left to the mercy of the average jobbing gardener he can always be purchasing plants. Recently I had occasion to plant some standard Roses in one of the villa gardens that are to be found all around London, and although the soil was excellent, the Roses had been a failure every year. I could see at a glance what was wrong, for in the same street there were Roses flourishing most wonderfully. On removing the old trees I found just a big basin of good soil, and beneath an almost rock-like condition of the soil, so much so that a pickaxe had to be brought into requisition. If the busy amateur would but see that for every standard or bush planted the lower soil were well broken up, Roses would flourish far better, even though near the smoke. Holes at least 2 feet each way and $2\frac{1}{2}$ feet to 3 feet deep should be dug out and good manure added before the soil is returned, and, if possible, let any poor-looking soil be replaced with some nice fibrous loam, although in nine cases out of ten the staple soil is good enough. Of course, the varieties selected must always be considered. It is courting failure to plant such Roses as Mrs. W. J. Grant, Liberty and Niphetos; but Roses of the type of Caroline Testout and Hugh Dickson flourish most luxuriantly if well looked

after. Roses with glistening foliage do so much better than those with rough-surfaced leaves, and for this reason I would strongly advise planting some of the true Teas and China Teas. February and March are two excellent months for planting providing that the weather is open and snow does not come; indeed, I would quite as readily plant then as in November.

The Best Town Roses are Caroline Testout, Dr. O'Donel Browne, Gustav Grunerwald, Hugh Dickson, La Tosca, Mme. Abel Chatenay, Mme. Jean Dupuy, G. Nabonnand, Peace, Mme. Isaac Pereire, Mme. Ravary, Mrs. Paul, Johanna Sebus, Lady Ursula, General Macarthur, Ulrich Brunner, Prince de Bulgarie, Mrs. A. R. Waddell, Lady Ashtown, Laurent Carle and Marie van Houtte.

RAISED BEDS FOR DECORATIVE ROSES.

THIS is no new idea, but its advantages are very evident, especially when the plants are grown upon the seedling Briar, the stock now most largely employed. The greater depth of soil provided is a consideration, but the elevation also encourages a warmer condition of the soil, a very important fact. In badly-drained soils the raising of the beds would to some degree compensate for the lack of drainage, because there are channels provided between the beds which would take away a quantity of surface water.

Last season I had occasion to make up a number of beds, and as I had a quantity of good soil I raised the beds fully 1 foot above the ordinary level of the surrounding land. It was all newly-worked land, and the alleys were depleted of some of their soil, which went towards the raising of the beds. The soil was allowed to lie some time

PLANT WONDERS OF BY-GONE DAYS.

THE BAROMETZ AND THE BARNACLE TREE.

EVEN by quoting such high authorities as that ancient traveller, Sir John Maundeville, who "did" a tour of the world between the years 1322 and 1356, and who on his return wrote, just as a modern would do, an account of his "Voiage and Travaile"; or that still more eminent seeker after knowledge, Pope Pius II., who visited Scotland in 1468, I fear I shall not be able to convince my readers of the existence of these two vegetable wonders.

But "please, sir, it's not our fault. We cannot help living in the twentieth century. It would have been quite 'all right' if this copy of THE GARDEN had been dated January 20, 1360." No

but never-to-be-found class of the vegetable kingdom, "*Plantæ fabulosæ*." Mr. Carnegie may sleep peaceably; there will be no battle royal for their possession, and not a single "wherry" need be built for their protection.

How came it that they were ever believed in? The interest of these two particular zoophytes (plant animals), as I believe the old technical term was, lies very largely in their history and their *raison d'être*. They belong to a totally different Order from most of the fabulous plants of antiquity, inasmuch as they were certainly possibilities if the data and the general knowledge of the times be taken into consideration. In other words, they were attempts at explaining undoubted facts.

The Barometz.—In the case of this wonder, when Sir John Maundeville left England in 1322 Cotton clothing of any description was only known from afar, and was so costly that only the very great ones of the world could afford to have it. The Cotton Plant still remained in its home in the East, and America was then undiscovered. Everyone, however, was familiar with wool and the source of wool, viz., the backs of sheep. So when Sir John in the course of his travels reached India, he would be told about the making of the fine muslins and calicoes, and he would be shown the Cotton Plant. The ripe fruit bursting and disclosing a substance that looked just like the wool with which he would be familiar at home, doubtless made it easy for him to believe what he was told about the "Melon" containing a little lamb, or else prompted him to make this explanation "on his own."

When he returned and published his book, he had a picture of the "marveylle" made and inserted. Now this illustration is curiously like in leaf and fruit one of the Cotton Plant (*Gossypium herbaceum*) published in Burnett's "*Plantæ Utiliores*." If only there was not the head of a little lamb peeping out from each pod, the likeness would be exact. There is no doubt that it is the Cotton Plant that is figured. Now Sir John knew that wool must come from sheep's backs. It never entered into his head that it could come from anywhere else. Therefore he said this fruit contains a little lamb, and so he had it pictured. And thus the Barometz came to life. An interesting exercise in plant-lore would be to trace the different stages in the growth of the mythical plant until it became in the popular mind like our illustration, which represents its highest development, and is taken from a rare French work by Claude Duret, published in 1605, and entitled "*Histoire Admirable des Plantes et Herbes esmerucillables et miraculeuses en Nature*."

Another would be to try to explain how the original Barometz (lamb), which was some kind of Fern that grew in Tartary and had, under certain conditions, a fancied resemblance to a lamb, got mixed up with the Lamb Tree of India, and eventually gave it its name. That it was so seems certain, else how could Erasmus Darwin write in his botanical poem, "The Loves of the Plants,"

Cradled in snow and fanned by Arctic Air
Shines, gentle Barometz! thy golden hair;
Rooted in earth, each cloven hoof descends
And round and round her flexile neck she bends;
Crops the gray coral-moss and hoary Thyme,
Or laps with rosy tongue the melting rime,
Eyes with mute tenderness her distant dam,
Or seems to bleat, a vegetable lamb.

—E. DARWIN, 1790.

The Barnacle Tree is probably an older creation, and it has been alive in more recent times, or should I rather say half alive? It appears to have had a similar origin to that of the Barometz,



THE BAROMETZ OR 'VEGETABLE LAMB' AS DEPICTED IN CLAUDE DURET'S BOOK.

until it was in a good, workable condition, and the Roses were planted in the beds quite late in April. Although such a dry summer followed, I had a glorious display from these beds. I should say that the plants were cut down nearly to their bases at the time of planting. This, in my opinion, should always be carried out with Roses planted in spring, excepting, of course, rambler and climbing Roses.

I know some growers advocate adding sand to heavy soil. This I believe to be quite unnecessary. The fact of the soil being elevated will be quite sufficient. Add some burnt earth, if it is available, but leave the sand severely alone. A Rose garden with raised beds would take away that squattiness which is sometimes apparent, and it would certainly tend to the freer growth and more complete ripening of the wood. Of course, no one would suggest raising beds where the soil is very light and porous; but in the majority of gardens the owners could well carry out the idea with advantage.

P.

one then would have doubted the existence "in the islands of the Orcades" or in "a small island in Lancashire, called the pile of Foulders" of "Trees that beren a Fruyt that becomen Briddes fleeynge" (Maundeville), or that in "a kingdom that men clepen Caldilhe: that is a fulle fair Contree, there growethe a maner of fruyt as thoughe it waren Gowrdes; and whan thei ben rype, men kутten hem a to and men fynden with inne, a lytylle Best, in flessche, in bon and blode, as though it were a lytylle Lomb with outen wolle. . . . Of that Frute I have eten; alle thoughe it were wonderfulle: but that I knowe wel that God is marveyllous in His werkes."

Just imagine what an ordering of aeroplanes and what a rush there would have been between Lipton's and Lyons' on the one hand, and Bunyard's and Rivers' on the other, for that "fair Contree" beyond Cathay to secure such a prize. Perhaps it is as well that we now recognise both the Barometz (see above) and the Barnacle or Goose Tree (see page 33) as belonging to that most interesting

viz., the endeavour to explain facts with imperfect data and small knowledge. Numberless sea-birds were seen every year in parts of the West Coast of Scotland, the North of Ireland and the Orkneys, but no nesting-places or eggs were ever found. Whence came they then, or how? The clue seemed to be given when it was noticed that there were quantities of a "Tulip-shaped" shell either on the rocks or on bits of wood or trunks of trees wherever the birds were, and that every now and again something very like feathers (really the plumose cirrhi) protruded from them. Two and two were put together and the Barnacle Tree was born. The tree's existence was unquestioned, and it grew with the ages until, in its latest development (as in our illustration), the fruit that fell into the sea became fish, and those that fell on the land, birds. (C. Bauhin. *De plantis a divis sanctisve nomen habentibus*. 1591.)

Although William Turner (*circa* 1550) had to consult an Irish priest, Octavianus, before he could make up his mind to insert the wonder in his book, and although Gerard (1597) was evidently very much perplexed as to whether he should admit it into his Herbal, there seems to have been a sneaking idea that there was something, after all, in it, which lasted for many years afterwards.

In 1707 Bishop William Fleetwood of St. Asaph collected a number of "Curiosities of Nature and Art in Husbandry and Gardening," and published the same under the above title. He devoted some fifteen or sixteen pages to discussing the question of how the Barnacle's life is kindled. He sums up as follows: "The seeds of our Barnacles disclose themselves in the Shells of our Analiferous Plants and give new Children to the Race of Water-Fowl. 'Tis not the Barnacle who hatches these Eggs. The Sun does the mother's office." Although the Bishop was quite certain no fish ever became a fowl, it seems clear that he thought some sort of eggs got into the shells of the fish, and that these were in some mysterious way hatched by the sun. Here in this second myth there is a great mine of interesting old books to be explored before we can account in a satisfactory manner for its rise and fall.

JOSEPH JACOB.

RHUS TRICHOCARPA.

ON one or two occasions last year attention was directed to this showy Rhus, its special attraction being the brilliant colour assumed by the leaves previous to falling. Full-sized leaves are 9 inches or 1 foot long, and possibly they would become larger on vigorous plants. Each one is composed of eleven or more leaflets; therefore a plant well clothed with leaves may well be imagined to be a very showy object at the autumn season. *R. trichocarpa* is not a well-known species, though it is not a new plant, for it was described by Miquel many years ago. It is a native of Japan and Korea, and is well worth including among select garden plants.

THE BARNACLE TREE, AS DESCRIBED BY OLD WRITERS ON GARDENING.



THE FLOWER GARDEN.

SWEET PEA NOTES.

Seed-Sowing.—In these days, when the smallest provincial societies have their keenly-contested classes for Sweet Peas, it is safe to assume that hundreds of thousands of seeds are sown in January. The most successful exhibitors, it is claimed, sow all their seeds in cold frames in the autumn; but I have noticed that they do not forget to make further sowings in the spring in order to maintain a long succession of perfect blooms. The precise date for sowing naturally

down at Sweet Pea culture who swear by 3-inch pots, and others who affirm with almost terrifying solemnity that no good can result unless 6-inch pots are used. Let growers consult their fancy and their convenience in this matter, and splendid success will reward their efforts, provided that all other points of culture have correct attention at the proper time. As far as compost for the seeds is concerned, all are agreed that the ideal is a mixture of fibrous loam and refuse manure, with coarse sand, and the proportion of the second-named will vary from one-third to one-half, and of the last-named from one-eighth to one-tenth, according to the nature of the loam. No effort must be spared

to thoroughly mix the ingredients, and the heap may advantageously lie upon the potting-bench for several days before use. When it is placed in the pots or boxes, it should be shaken down to give a pleasant firmness, and when levelled over it ought to be within about an inch or rather more of the edge. Such a space will allow a covering of half an inch above the ordinary seeds, and for a surfacing of sand before the white and wrinkled, mottled seeds are sown. Amateurs, who are not always as careful as they might be in the matter of watering, almost invariably err on the side of generosity, and they will find it wise to press the seeds particularly noted into this layer of sand and not cover them in at all, as they are extremely resentful of the slightest excess of dampness at their skins and young roots. Chipping or filing through the skin prior to sowing is adopted by many cultivators, but it is often a fad and is never necessary. It is a tedious task to deal thus with each seed, and therefore demands a considerable amount of time, and it is time wasted, for the vast majority germinate just as well without it, and those that do not can always be dug out of the soil and chipped if the growing point does not show through the surface within a reasonable period after sowing. Upon the completion of the actual seeding, a gentle watering may be given if it is deemed necessary, but with the soil in the correct condition this will rarely be the case. Stand the pots closely together on the stage of an ordinary greenhouse, and do not make the slightest attempt to hurry them along; a natural start in a genial temperature favours strength from the first. It is imperative that the soil shall be kept equably and

pleasantly moist, but amateurs are urged not to be too heavy-handed with the water-pot, more especially where the white and mottled seeds are concerned, or it will inevitably be followed by rotting either of the seeds or of the roots, and perhaps of both, in any case a great injury will be done. The cultivator who carefully stores rubbish beneath the stages of his greenhouse will have slugs, and he is warned that these slimy members of the animal kingdom have a wonderful knowledge of Sweet Peas, as is proved by the fact that they only ruin the choicest varieties.

HORACE J. WRIGHT,

D,

varies slightly in each district, especially when the seeds go direct into the open ground; but so far as greenhouse sowing is concerned, it will be found that between the present time and the end of the first week of February will yield complete satisfaction. It has never appeared to me to be really material whether 3-inch pots, 6-inch pots, or boxes are pressed into service; the results depend more upon management from start to finish than the particular form of receptacle chosen for the accommodation of the seeds. My own experience undoubtedly favours boxes about nine inches in depth, but I have many friends who can beat me hands

SWEET PEAS TOO MUCH ALIKE.

MANY of us will regret that the beginning of the new volume marks the end of A. B. Essex's notes on Sweet Peas, for they have been characterised by a freshness and outspokenness which were especially welcome to those of us who are interested in the development of these flowers. The one thing I missed in his articles and hoped to find as number succeeded number was an authoritative summing-up of the best half-dozen among the novelties offered this season.

However, we must look to Mr. Horace Wright to supply this deficiency, for he has been a constant visitor at the shows this past year, and we may well assume that, unless these novelties have been shown repeatedly, their raisers have little faith in them. Such a list would be exceedingly useful, for each year it becomes more and more difficult

generally comes when one has made the discovery for one's self.

After seeing many of these quasi-novelties and acres of others still to come, I am beginning to wonder whether we are not rapidly reaching the stage when the factors responsible for shape and colour in this flower have been obtained in all possible combinations. As it is, there are said to be some 800 varieties in existence—that is at least 750 more than most of us care to grow. The raising and fixing of these has proved an easy task, and if more are to come I think that we may well ask that they should be novelties in the proper sense of the term, that is, distinct in colour and a distinct improvement on varieties already in existence.

Much might be done by the National Sweet Pea Society to secure this end by publishing a straightforward account of their trials each season. Without meaning to be in the least invidious, I would

their warm colour and graceful outline forming a charming foil for the blossoms of the Christmas Roses. Informal grouping of both Ferns and flowers will result in much more pleasing effects than anything approaching formality would do. The accompanying illustration of a single cluster of Christmas Roses nestling among the dead brown foliage of Ferns will give some idea of the value of this combination in the early days of the year.

COLOURED PLATE.

PLATE 1443.

NEW TUBEROUS BEGONIA LADY CROMER.

ALTHOUGH wonderful improvements have been effected among many kinds of greenhouse plants during recent years, there are few which bear the impress of the florist's art so much as tuberous Begonias. When we compare the best of the new varieties with those in existence a decade or two ago, the progress made is vividly brought home to us. Not only have new colours been secured; the form and size of the flower have also been greatly improved, and, unlike many other genera, the plants have not been constitutionally weakened in the process, but rather made more vigorous.

The summers of 1910 and 1911 witnessed the introduction of many superb new varieties, among which was the beautiful Lady Cromer, shown in the accompanying coloured plate. This was raised by the well-known firm of Messrs. T. S. Ware ('02), Limited, of Feltham, and was shown in superb condition by them at many of the leading exhibitions during 1910 and last year, notably at the Royal Horticultural Society's show at Olympia, the Horticultural Section of the Royal Agricultural Society's show at Norwich, and at the Royal Caledonian Society's show at Edinburgh. So highly was it thought of when thus shown that it received a certificate from each of the societies named.

The colour is exceptionally pleasing, and the flowers are of that regular, Camellia shape so much

appreciated by those who love florists' flowers. Some of the blooms shown by Messrs. Ware last year measured 10 inches in diameter. Although so large, these blooms were borne well above the foliage, thanks to the stout and erect stems, which are characteristic of the variety. Indeed, so strong is its habit that stakes or supports of any kind are not necessary. There is no doubt that this is one of the finest, if not the finest, tuberous Begonias that have ever been raised, and it is through the kindness of Messrs. Ware, who supplied the plant from which our coloured plate was prepared, that we are enabled to publish the accompanying supplement.

Tuberous Begonias of ordinarily good quality are easily raised from seed, and an article describing the process appeared in our issue for January 6.



CHRISTMAS ROSES AND FERNS IN THE WOODLAND.

to pick out those new varieties which are worthy of cultivation. This state of affairs is due chiefly to the amazing capacity some raisers have developed for detecting minute differences between their own varieties and those already in existence. My knowledge—and the same is true of many other growers—has not developed to this extent, and I have to confess that the only difference I can see between some of the novelties and the older types is in the labels at the end of the rows and, as a sarcastic friend once remarked, in the prices.

Neither can I think that the fault is altogether mine, for I find that Sydenham, in "All About Sweet Peas," frankly states that many of these so-called novelties are synonymous with the older types. The National Sweet Pea Society also helps in this matter in its lists of "too-much-alike" varieties, though, unfortunately, the information

suggest that the account should be compiled by amateurs, many of whom possess ample knowledge of the subject to deal with novelties justly. Their report would provide a sufficient basis for any awards the society saw fit to make to meritorious varieties. The raisers with real novelties to sell would, I believe, welcome such a report, while it would save many of us from wasting space which could be devoted to better purposes.

Cambridge.

R. H. BIFFEN.

CHRISTMAS ROSES IN THE WOODLAND.

ONE of the most beautiful effects in the woodland at this season is that of Christmas Roses grouped among hardy Ferns. The fronds of the latter if left on all the winter, as they should be, give us just now a rare gradation of russet and deep brown,

TREES AND SHRUBS.

THE GUELDER ROSE OR SNOWBALL TREE.

(VIBURNUM OPULUS STERILE.)

THIS is probably the most extensively cultivated of all the deciduous Viburnums grown in our gardens, and deservedly so, for it is a beautiful object when laden with blossoms in early summer. It is a variety of *V. Opulus*, which is found wild in some parts of the country. The flowers of the species are in flattened heads or clusters, only the outer ones being sterile. In the subject of this note all the flowers are sterile, forming round clusters or balls of white flowers; hence the name Snowball Tree. This Viburnum is excellent for small or large gardens, and is also a good town shrub. The plants thrive in most soils, and are readily propagated by cuttings of half-ripened shoots placed in a slightly-heated propagating-frame during August, or in a cold frame later in the season. Layering also forms a convenient means of increase. Mature specimens reach a height of 8 feet to 10 feet, sometimes more. Positions are easy to find for this Viburnum in the garden, either as a single specimen or several together in a bed on the lawn and grouped in the shrubbery border.

As a subject for large show-houses in spring the Snowball Tree also receives attention, the bushes readily responding to the heat of a warm greenhouse. In addition to the bush form, standards 4 feet to 5 feet in height are grown by nurserymen specially for forcing.

A. O.

THE BEST TREES FOR LAWNS.

ENQUIRIES are often made regarding trees which are available and suitable for conspicuous positions on lawns, for, as a rule, such trees are likely to become one of the most important features in the garden; therefore it is desirable to obtain

kinds which are somewhat out of the common, but which are likely to develop freely and possess distinct characters either in foliage or flowers. The majority of our common trees are difficult to beat as regards general appearance, but they can be accommodated elsewhere, and prominent positions may be given to rarer subjects. One of the most popular trees in the neighbourhood of London many years ago appears to have been the Tulip

biloba). Its free and graceful yet upright habit, together with its curious leaves, which resemble the pinnules of a giant Maidenhair Fern, make it an object of admiration to all who see it. The Indian Bean Tree (*Catalpa bignonioides*) is one of the most beautiful of all large-growing flowering trees, for its large terminal panicles of Tecoma-like flowers are borne freely in July and August. Its handsome cordate leaves alone would war-

rant it receiving attention, and it has the advantage of being a good shade tree. The variety of the red-flowered Horse Chestnut known as *Æsculus carnea Briotii* is richer-coloured than the type, and is calculated to create much pleasure when in bloom. A rare Chestnut suitable for the purpose is the Indian Horse Chestnut (*Æsculus indica*). It grows into a handsome tree and flowers as late as July.

Where the ground is good or no difficulty arises in providing rich loamy soil, the Knap Hill variety of *Quercus coccinea* is an excellent tree to plant, for its leaves take on particularly rich shades of colour in autumn. Two other Oaks which well merit attention are *Q. Mirbeckii* and *Q. velutina rubrifolia*. Both are remarkable for their large, handsome foliage. *Sophora japonica* is an excellent lawn tree, for although it often forms a tall trunk with a comparatively small head of branches when drawn up by other trees, it usually develops a spreading head, with branches sweeping the ground, when it stands in the open. It bears good-sized panicles of cream-coloured flowers during late August and September. An ornamental-leaved tree of considerable merit is noticeable in *Kœlreuteria paniculata*; it also bears large panicles of



A WELL-GROWN EXAMPLE OF THE COMMON GUELDER ROSE, VIBURNUM OPULUS STERILE.

Tree (*Liriodendron tulipifera*), for good-sized specimens are to be seen in some of the older gardens. There does not, however, appear to be the same disposition to plant it now, though it is worthy of a corner on an extensive lawn, for few trees are more interesting when in bloom, and its leafage is not dense enough to kill the grass beneath the shade. Another useful tree which might be used more often is the Maidenhair Tree (*Ginkgo*

showy yellow flowers in August, which in sunny years are succeeded by curious triangular, inflated fruits. The Red Gum (*Liquidambar styraciflua*) is popular in some places, for its foliage colours brilliantly in autumn. A rare Walnut which might be provided with room is *Juglans cordiformis*. It differs from the common Walnut by its fruits being borne in drooping racemes. The Constantinople Nut (*Corylus Columna*) is an

interesting shade-producing tree which is rarely met with. Among the Limes, *Tilia dasystyla* may be singled out as specially worthy of attention, for its leaves keep a deep green colour to the end of the season, which is not usual with some Limes. *Fagus sylvatica heterophylla* (the Cut-leaved Beech) forms a handsome specimen tree well suited for a lawn; and the same may be said of the Golden-leaved Larch (*Pseudolarix Kämpferi*). Although the Mulberry is popular as a lawn tree in some quarters, it is not to be generally commended, for when its fruits are ripe they drop and cause annoyance by staining the clothes of children and others who may be tempted beneath the branches. Purple and Copper Beeches are, however, commendable in every way. Among evergreen conifers, the Cedars are perhaps most popular, Lebanon, Atlas and Deodar all being available. Perhaps one of the most widely planted at present is *Cedrus atlantica glauca*. *Cupressus lawsoniana*, *C. pisifera*, *C. macrocarpa* and *Thuya plicata* are all useful. Weeping trees are favourites with most people, and half-a-dozen good ones are *Ulmus montana pendula*, *Fagus sylvatica pendula*, *Fraxinus excelsior aurea pendula*, *Cratægus monogyna pendula*, *Ilex Aquifolium pendula* and *Betula alba Youngii*.

Useful smaller-growing trees may be obtained in *Magnolia conspicua* and *M. soulangeana*, with white and white-flushed purple flowers respectively; *M. Fraseri*, with buff-coloured flowers of large size;

Almond find many admirers, while *Pyrus spectabilis flore pleno* is well worth attention. Double-flowered Thorns, both scarlet and white, are always attractive, and *Cratægus Crus-galli var. splendens* is worth planting if only for the sake of its autumn colour.

If one Laburnum only is wanted, that one should be *L. Watereri*, a hybrid between *L. vulgare* and *L. alpinum*, partaking of the good qualities of both. The White Beam Tree (*Pyrus Aria*) provides a showy variety called *majestica*, which is well worth anyone's attention, both by reason of its silvery foliage and coral red fruit. *Davidia involucrata* will doubtless become popular for a lawn tree, though it is yet too early to judge of its decorative value. Its showy character in China, however, is highly spoken of. W. D.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

ALTHOUGH the Apple, or at any rate its progenitor the Crab, is indigenous to this country, and the many good varieties which have sprung from it have been with us for centuries, and although it is the most valuable and easiest-grown of all our hardy fruits, and can be grown in many parts of our country to a perfection

of our race. We move but slowly, but we are now waking up in the matter of Apple-growing, and the rising generation will, I believe, live to see the time when home-grown Apples will be as plentiful and indispensable as the Potato is to-day, when every farm, however small, will have its orchard, and every hedge in every field, as well as every cottager's garden in most of our counties, will be made to yield a rich harvest of this fruit. Few of us are aware of the large extent of land which has been placed under this fruit in many parts of England during the past few years.

The Apple as a Market Crop.—It is now amply proved that the Apple is one of the best paying crops a farmer can grow after the trees become established, provided the land and district are suitable for its growth, that the trees are well looked after, that the right sorts are grown, and that business aptitude is brought to bear on the disposal of the fruits. As bearing on this point I recently had an opportunity of inspecting and judging an exhibition of fruit tree pruning by young students in a Worcestershire orchard. The orchard was part of a large farm, and consisted chiefly of Apples and Plums planted alternately. The Plum trees, being shorter-lived than the Apple, will be dispensed with in the course of time, the Apple trees then appropriating all the space to themselves. The trees were all standards, growing on arable land, with Gooseberry and Black Currant bushes growing between, and were apparently between twelve and fourteen years old. I never saw finer, healthier, or better-grown trees, the varieties being mostly Worcester Pearmain and Bramley's Seedling. The trees of the latter variety, I was credibly informed, both in 1911 and the previous year, had more than paid for the freehold they were growing on by the value of the crops they bore. When such facts are known, is it any wonder that Apple-growing is becoming popular among farmers?

Protecting Blossom from Frost.—The gentleman who owned this orchard has adopted a most ingenious, and as far as I know original, method of protecting his trees from damage by frost while in bloom. Lamps containing some fluid which emits a dense, warm poth of smoke when the lamps are lighted are placed at certain intervals among the trees. This has the effect of raising the temperature of the air sufficiently high to save the bloom. To warn the owner of the orchard against the approach of frost, an electric wire is attached to a thermometer among the trees, which, immediately the mercury drops to below freezing-point, rings a bell in the farmer's bedroom, when hands are immediately called up and the lamps lighted. OWEN THOMAS, V.M.H.

(To be continued.)

NEW PEAR MRS. SEDEN.

SOMETHING in the nature of a mild sensation was created at the last meeting of the Royal Horticultural Society by the presence of a small round Pear named Mrs. Seden, which was shown for the first time. The new Pear was raised by crossing Seckle with Bergamotte Esperen, the object in view being to obtain a late Pear with the flavour of Seckle. The flavour is grand, and the flesh is free from the grittiness which sometimes characterises the fruits of Bergamotte Esperen. The colour is yellow, toning to a bright crimson on the sunny side. This Pear was shown by Messrs. James Veitch and Sons, Limited, Chelsea, and it received an unanimous award of merit.



PEAR MRS. SEDEN, A NEW DESSERT VARIETY FOR USE IN JANUARY.

and *M. grandiflora* for the Southern Counties. The latter, where it will grow, is always popular by reason of its large, glossy, evergreen leaves and white, fragrant flowers. *Prunus Avium flore pleno* gives a wealth of double white flowers in spring, while the white, pink and red forms of *P. serrulata* are equally desirable. *Cercis Siliquastrum* demands attention, not only on account of its pretty Pea-shaped, rose-coloured flowers, but also by reason of its reputed historic associations, for it is popularly supposed to be the tree upon which Judas Iscariot hanged himself, and for that reason bears the common name of Judas Tree. Double-flowered Peaches and the common

that it can be grown in no other, yet its culture was engaged in by few and its great commercial value was disregarded until little more than twenty-five years ago. In my younger days one scarcely ever saw an Apple tree growing, except in some rich man's garden or occasionally in some decrepit and neglected farmhouse orchard. The Apple as a food for the people in those days was a negligible quantity, which the common people scarcely ever partook of. Indeed, I remember very well when even the peelings were appreciated as a gift.

This apathy to the more extended growth of this valuable fruit is, I am afraid, characteristic

GARDENING FOR BEGINNERS.

"WON'T GROW" DISEASE OF POTATOES.

SIMPLE and expressive as the above title appears, it is, nevertheless, a misnomer, for—if a Hibernianism may be allowed—the disease is no disease at all, or at least not what is generally understood to be such in Potatoes, although physiologically it may be so termed. But, leaving hair-splitting to scientists and coming at once to



POTATO "SET" MAKING POOR GROWTH. A, ORIGINAL SPROUT MADE IN TRAY; B, WEAK HAULM FROM BASE OF A; C, SMALL AND ONLY TUBER FORMED.

the main point, it may be said that the conditions under which Potatoes either absolutely refuse to grow or yield from nil to about half a crop are two, and each is due to a different cause.

When no growth whatever takes place, it is safe to assert that the tubers have either accidentally or carelessly been exposed to just sufficient frost to kill the bud within the "eye," and yet without doing the tuber damage enough to make it apparent that it has been frost-bitten unless very closely scrutinised, when, immediately within the "eye" and round the bud, or place where the bud or sprout should appear, a very small arc of brown discoloration may be observed in the case of tubers that have not been put through the greening process often practised on those reserved for "seed" purposes. But if they have been greened, the mischief may easily pass unobserved by even a very critical eye.

So much for the first cause of the trouble, which is, undoubtedly, very rare; but not so the second. It is by far too common, and the method of avoiding it seems to be a lesson which many growers are much too apathetic to readily learn and profit by. The mischief alluded to is done by allowing the tubers to remain too long in the ground after full growth has been attained, or, briefly, it is due to over-ripening. How often has one heard the expression, particularly about early or second-early Potatoes required for "seed," "I'll let them stay to get ripe." If such apparently considerate

persons only knew and once discovered the excellence of the very opposite course of action, they would, without doubt, always follow it, as the writer has from the time of his first making the discovery.

Evidence of something radically wrong with my patch of early Potatoes made itself manifest some years ago, when only here and there were plants producing anything approaching a satisfactory crop, while the others were yielding as little as from half an ounce to half a pound per plant; yet those various results were being obtained from tubers all of which had been set up in sprouting trays, and all well budded when planted. Upon first making their appearance above ground, the plants showed up quite differently in regard to the amount of haulm produced, and as great a difference in the healthiness of the haulm. An examination of some of the weakest-looking plants, made by digging them for the purpose, revealed the fact that those with the weakest haulm had not continued growing from the bud originally produced, but had sent out a slender stem from its base, having miserably unhealthy foliage and behaving somewhat as shown in the rough sketch reproduced herewith. Further, the tubers giving the poorest yield were in every case as firm as when planted, whereas those which produced a somewhat better result had slightly decayed. It may be here remarked that it is only those tubers that thoroughly decay after planting that give the fullest return in new tubers of which they are capable under the circumstances in which they are grown. But, to proceed, here was a puzzle, and not until after having read that the probable cause of Scottish-grown "seed" giving more satisfactory crops in England than English-grown "seed" was that the Scottish-grown tubers were less fully matured did the solution appear in sight. The produce of a few plants of the very early sort above mentioned, dug while the haulm was yet green, yielded a crop far in excess of previous years. The same method of obtaining "seed" tubers has since been regularly carried out, and with like success. Can it then be doubted that in the direction here indicated lies the road to the remedy of the "Won't grow" disease?

A good plan to adopt in regard to early and second-early varieties is to select from the tubers dug for table use during the summer those that are of proper "seed" size, leaving them on the ground to green and for the skins to fasten, then carefully storing for planting the following spring. As a greater quantity of "seed" of later kinds is generally required, this should be obtained by lifting a part of a row, or whatever will yield the requisite amount, picking out the small and ware tubers and using the latter at once, as if stored they will shrivel, and either treating the selected "seed" to the greening process, if there is no risk of their getting frozen, or storing straight away at discretion.

It behoves readers to keep an eye open for the mischief, the cause of which is so far little understood.

It is quite probable that after the hot, dry summer of last year much will be heard next season of this dreaded "Won't grow" trouble.

Howsham, Lincoln.

WILLIAM BOOTH.

CANKER IN FRUIT TREES.

OF the many trials that beset the fruit-grower, canker is one of the most provoking. There seems to be no certain cure for this dire pest but of remedial and preventive measures there are plenty. Most readers are doubtless painfully aware of the presence of canker. It is caused by a fungus that chiefly attacks Apple trees, but it does not confine its attention to this fruit only, as it is sometimes seen on Pear and Plum trees. For the benefit of those who fortunately are not acquainted with the disease, we depict in the accompanying illustration a few Apple shoots that are badly attacked. The best thing to do with diseased branches is to cut away the affected parts as soon as the disease is identified, using a sharp knife, afterwards applying tar to the wound. It is most important that all parts cut away should be collected and straightway burnt. Some trees are far more prone to this disease than others. Trees of good eating Apples, particularly Ribston Pippin and Cox's Orange Pippin, are subject to canker, and the writer has in mind large plantations of Dumelow's Seedling (Wellington) that are being grubbed up owing to canker and replaced with Bramley's Seedling, which seems to withstand the disease quite well. It appears that those trees having the thinnest and smoothest bark are most susceptible to attack. American blight is often the forerunner of canker, and injury by hail or frost and bad pruning are common means whereby the canker fungus will enter a tree. Good results follow the application of superphosphate of lime, nitrate of potash, nitrate of soda and sulphate of lime, mixed in about equal parts, with rather more of the superphosphate. This should be applied in autumn and spring in the proportion of a quarter of a pound to the square yard. The mixture should be sown round the tree and lightly pricked in with a fork.



APPLES SHOOT ATTACKED BY CANKER. NOW IS THE TIME TO EXTERMINATE THIS PEST.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Early Peach Trees.—Where conditions permit, these may be started any time from the end of November onwards; but where this is practised it will, of course, be necessary to use artificial means of heating. No attempt must be made at the commencement to unduly force the trees into growth. No fire-heat will be required for the first fortnight, unless the weather at night is very cold. Give a free circulation of air in the day-time and keep a temperature of about 40° to 45° at night.

Later Trees.—Excellent crops of fruit may be obtained from either permanently-planted trees or those grown in pots in houses containing no artificial heat. Pruning and the cleansing of the house and trees should be done now as soon as possible. Assuming that the trees are in a healthy condition, the borders will merely require top-dressing after the trees are pruned and cleansed.

Vines.—These, too, require an annual cleansing, both of the rods and surroundings, to maintain them in a healthy condition. Those that are still resting ought now to be pruned without delay. Cut back last year's growth to within two plump eyes at the base with a sharp knife. Well wash the house, both woodwork and glass. This is very important, especially where red spider and mealy bug have been troublesome. Wash the rods well also with an insecticide after first removing the loose bark.

Strawberries.—To force these successfully, select plants that were grown last season expressly for the purpose in 5-inch or 6-inch pots, and which have become well filled with roots and possess well-ripened crowns. Place the pots near to the glass and water very carefully for a time, though the soil must not be allowed to become dry. Start the plants quite gradually, inuring them to more warmth as the foliage extends.

Dwarf Beans.—Make occasional sowings of these for fruiting under glass. Pots 9 inches in diameter are a convenient size. Fill about half-way with loam not too fine and about half the quantity of horse-manure mixed with it, such as that used for making Mushroom-beds, leaving the soil quite loose. Sow a couple of seeds in four or five places equidistant. These soon germinate in a warm house, and make good bushy plants if the points are removed and allowed to break. Top-dress afterwards to within 1 inch of the top of the pot. Water freely and syringe the plants while growing.

Onions.—A sowing should be made now under glass where large Onions are required either for exhibition or kitchen use. Sow the seed thinly and evenly in boxes containing a fairly porous mixture which has been passed through a fine sieve, and give a good watering in. Put the box in a gentle heat, and when the seedlings are through, place near to the glass.

Chrysanthemums.—The earliest batch of cuttings, especially those plants that are intended for providing large blooms, will now be ready for potting singly. Cuttings may be taken of decorative varieties, placed in small pots of light, sandy soil, and either rooted in a cool house or frame. Keep them close until rooted and protect from frost.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Kitchen Garden.—As long as the early hours of the day are too cold for nailing and pruning, any ground that has been freed of crops should be cultivated, on frosty mornings transporting manure to those quarters that require enrichment, and spreading it evenly over the surface ready for digging in. The burnt material remaining from rubbish and wood fires and also composts should be removed to where they will do most good to crops and plants.

Seed-Sowing.—Broad Beans in double rows and at 5-foot distances between the rows should be sown at once, and on sunny borders the earliest crop of Peas may be sown. It usually happens at this particular period that ground prepared in autumn can be rendered sufficiently dry by running a Dutch hoe through it in the forenoon and sowing in the afternoon. The drills at this season are best shallow, the covering being drawn over the seeds in the form of an extended mound. Sow rather thickly, and do not depend too much on the success of this crop.

Small Crops.—At the same time sow also Spinach, and among the Spinach a few seeds of Radish and Cos and Cabbage Lettuces. If there is space near the base of a wall with a south aspect, seeds of Radish and of Lettuces should be sown at the same time. Early Carrots sometimes succeed sown thus early, and some gardeners sow Leeks now. The seeds are a long time germinating, and the longer the season Leeks are given, the bulkier the crop.

Horseradish.—The finest roots are produced from young plantations, and these may be made at any time in spring, the earlier the better. The ground should be dug two spits deep, and short pieces of the roots inserted at a depth of 10 inches or so from the surface as the work proceeds. One foot apart is a suitable distance to arrange each set.

Jerusalem Artichokes.—Lift these, store as many as will be required, and plant medium-sized roots for next year's supply. They require a heavy dressing, preferably of cow-manure, and deeply-worked soil.

Taking Cuttings.—Last autumn the cuttings of tender plants were so scarce that some of the kinds rooted then have been kept growing all through the winter, and two or three batches of cuttings rooted from them. After this time most kinds will root freely in a propagating-pit where there is enough bottom-heat to enable the cuttings to strike out roots in a few days. The plants which root freely at this time include Lobelias of the King William and Waverley type, Ageratums, Verbenas, Salvia splendens in variety, Calceolarias Burbidgei and amplexicaulis.

Sowing Flower Seeds.—Seeds of hardy and half-hardy perennials to flower the same season may now be sown. Chelone barbata, Pentstemons heterophyllus and the florists' varieties, Michaelmas Daisies, Commelina cœlestis, Verbena venosa, which requires a greater heat and longer period for germination than the others mentioned; Hollyhocks in variety, sown now in boxes, pricked off into 3-inch pots as soon as large enough to handle, and grown on without check, make good plants for September blooming.

R. P. BROTHERSTON.
Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Alpine and Rock Plants.—There are innumerable odd corners and partially-shaded borders in town gardens which may be made very beautiful and interesting by planting alpine and rock plants in them. I have in my mind's eye the charming picture made by hardy Ferns and alpines which filled a sunless recess between two villas. Others not so treated looked bare and uninteresting. These plants require a porous soil, and an ordinary border may be easily made suitable for them by adding old mortar rubble, spreading it about two inches deep on the surface, and then digging the whole in. Low-lying borders should be raised a few inches, and flat rockeries on such are generally successful.

Select Plants.—*Iberis corifolia*, *I. c.* Little Gem, *Myosotis rupicola*, *Phlox procumbens*, *Statice incana nana*, *Silene acaulis*, *S. alpestris*, *Achillea rupestris*, *Arabis albida*, *Campanula garganica*, *C. muralis*, *C. turbinata*, *Aster alpinus*, *A. a. alba*, *Arenaria montana*, *Draba gigas*, *Dianthus alpinus*, *Potentilla formosa*, *Sedums* and *Saxifrages*.

Digging Shrubbery Borders.—Every winter, and often every spring, the borders in which trees and shrubs are grown are dug, and much damage is done to the roots. Recently-formed shrubberies may be freely dug, provided the roots of the plants are not interfered with. Such loosening of the soil in which there are no roots ventilates the border, especially where heavy soils obtain, and the ventilation promotes healthy growth. Old shrubs are never too well fed at any time, and advantage should be taken of any tree leaves on the premises to scatter them on the surface and lightly cover them with soil.

Auriculas.—The choicest varieties in the borders should be protected from heavy rains, sharp frosts and snow. Although these plants are hardy enough to stand exposure through the winter, the light protection afforded will result in flowers of greater perfection. Keep all faded leaves regularly removed from the base of the plants, and put on the following compost in the form of a top-dressing: Light fibrous loam, leaf-soil and sand, all passed through a fine-meshed sieve together. Pack this compost nicely round the plants with the hands.

Periwinkles.—These are grand plants for the town garden, as they will thrive under rather adverse conditions. It is often a difficult matter to get plants to grow under trees, but Periwinkles will succeed. Not only do they grow well, but flower nicely, and both foliage and flowers are very clean. This is a good time to put in plants. The soil must be deeply dug, moderately enriched with manure, and if clayey, rendered porous by the addition of some gritty material. Strong, well-rooted runners planted about eighteen inches apart and duly pegged down will soon grow and cover the soil with a beautiful carpet of greenery.

The Garden Frames.—Excessive moisture is the great enemy of plants now growing in cool frames, and every effort should be made to lessen that moisture by ventilation, the picking off of fading leaves, and not spilling any water while watering plants that really require it.

The Greenhouse.—Ventilate between the hours of 9 a.m. and 2 p.m., warm the pipes every night, and water the plants in the morning only.

TOWN GARDENER.

THE KITCHEN GARDEN.

HINTS ON SOWING EARLY PEAS.

THERE is no vegetable more highly appreciated than the first dish of early Peas, and professional gardeners, as well as amateurs, are always eager to have this at the earliest possible date. During recent years the list of varieties suitable for early sowing has been greatly increased, but to the inexperienced this is not entirely an unmixed blessing. Many of the newer wrinkle-seeded varieties are of excellent quality, and quite suitable for sowing during the early days of February, providing a few simple precautions are taken; but if they are sown in the same way as is usually adopted for early round-seeded, midseason and late sorts, partial or total failure may, and often does, accrue. Indeed, it is to excusable ignorance at sowing-time that most of the failures among early wrinkle-seeded Peas are due.

Most amateurs, and not a few professionals, know only too well the disastrous tendency which the seeds of many of these varieties have to rot in the soil. They make a heroic attempt to germinate, but never succeed in getting above the soil. For this the seedsman is too often blamed. Were a portion of the same seeds sown a month or six weeks later, in nine cases out of ten they would be found to germinate quickly and grow away vigorously, thus exonerating the seedsman. It is a not very well-known fact that all seeds need a certain temperature, combined with moisture, in which to germinate; *i.e.*, at some particular temperature seeds of a certain kind will germinate more quickly than at any other. Increase or decrease the temperature from that point, and germination goes on more slowly; carry the temperature still further in either direction, and germination ceases, and if moisture is present in sufficient quantity decay sets in.

This is what, to a very large extent, occurs with Peas sown early in the year. The soil then is exceptionally cold and usually very wet, and if the seeds are sown, as is too often the case, as deeply as later sorts, the evil is aggravated.

A hint given to the writer some years ago by the late Charles Foster has proved so successful that it is here recorded for the benefit of others: Instead of sowing early wrinkled Peas 2 inches deep, as is usually done, only just cover the seeds with soil. If the natural soil is of a heavy, wet character, put a layer of coarse sand, half an inch thick, in the bottom of the shallow drill, sow the Peas, and cover them with another half an inch of sand, but no soil. This, owing to its inability to hold water to any appreciable extent, keeps the seeds comparatively dry, and, what is more important, is warmer than the surrounding soil. Round-seeded Peas do not seem to suffer so badly, but the wrinkle-seeded sorts are so much superior in quality that they more than repay for the little extra trouble that is entailed in carrying into effect the hints given above.

H.

THE EDITOR'S TABLE.

Iris stylosa from Winchfield, Hants.—The Hon. Mrs. Walkinshaw sends from Hartley Grange, Winchfield, Hants, some remarkably fine flowers of this beautiful and fragrant winter Iris, known better, perhaps, to some under its old name of

I. unguicularis. The following note, which accompanied the Irises, will, we hope, induce others to grow these plants: "I am sending you a few of my blue *Iris stylosa* for your table. I have a border on the south side of my greenhouse, about twenty feet long, planted two years ago. They have bloomed incessantly since November, and I gathered over one hundred and fifty blooms last week. I have a Myrtle hedge next to them, and generally put some of the green with the Iris, so I send a few sprays. I am sending buds only, in the hope that they will travel better and open in water. They come out very fast, and I pick between twenty and forty blooms a day."

Rhododendrons from Ireland.—Mr. E. Stuart Moore, Ballydivity House, Dervock, County Antrim, sends some beautiful trusses of *Rhododendrons* cut from the outdoor garden. The flowers are beautifully clean and fresh, and particularly welcome at this season. Mr. Moore writes: "I am now sending you a few blooms of *Rhododendrons* which you might like to see. They are growing on bushes from 12 feet to 20 feet in height, and have been flowering since the first week in December in sheltered corners of the lawn. The white flowers are Mrs. John Clutton, and the scarlet are from *Rhododendron nobleanum*. The splendid scarlet colour of these flowers looks dazzlingly bright in the sunshine, and brightens up the garden on the dullest day during the winter. The plants are over thirty years old, and are still growing larger. This place is in the North of Ireland, about five miles from the Giant's Causeway. Some years these *Rhododendrons* commence to flower the first week of November."

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Lælio - Cattleya Bella alba The Dell variety.—A bold and delightful variety, shown by Baron Schröder. The flower is of grand form, massive, white, with purple lip.

AWARDS OF MERIT.

Carnation Wivelsfield Wonder.—This is a white-ground fancy variety of the Perpetual-flowering class, a set which has proved more popular in America than in this country in the past. The flower is large and not over-petalled, the white ground being freely and irregularly striped with scarlet. Exhibited by Messrs. Allwood Brothers, Wivelsfield Nurseries, Hayward's Heath.

Cattleya Maggie Raphael alba Orchidhurst variety.—This is indeed a lovely *Cattleya* with beautiful recurving white sepals. The petals are likewise white and very broad. The lip is pale rosy mauve, with golden markings in the throat. Shown by Messrs. Armstrong and Brown, Tunbridge Wells.

Cymbidium rosefieldiense.—A very remarkable hybrid, shown by de Barri Crawshay, Esq. The large flowers are of emerald green, speckled with crimson brown. The lip is very pale yellow, likewise speckled.

Cypripedium Catiline.—Large flower of good shape, shown by the Duke of Marlborough. Dorsal sepal possesses rose purple markings; petals yellow, tinted purple. Parentage: *C. Mrs. William Mostyn* × *C. Leonidas superbum*.

Cypripedium Jucundum.—A grand flower with a hooded white dorsal, lined purple, and pale green base. The lip and petals are of a mahogany

colour. Shown by Messrs. Sander and Sons, St. Albans.

Cypripedium nitens beekensis.—A magnificent variety, shown by J. Gurney Fowler, Esq. The flower is erect, of excellent form, with brown wavy petals and greenish base. The well-formed dorsal is well blotched.

Cypripedium San Actæus Westfield variety. A very handsome variety, shown by F. A. Wellesley, Esq. Parentage: *C. insigne* Harefield Hall × *C. Actæus langleyensis*. The dorsal is very large, white, blotched purple.

Lælio-Cattleya Mrs. W. Hopkins.—A very attractive flower, also shown by F. A. Wellesley, Esq. Parentage: *L.-C. haroldiana magnifica* × *L. Iona nigricans*. The perianth is a lovely art shade of buff yellow, tinged with mauve at the tips of the segments. The lip is well defined and of a purple colour.

Odontoglossum crispum Queen of the Morn. A very striking *Odontoglossum* sent by W. Cobb, Esq., Normanhurst, Rusper, Horsham. The individual flowers are of good form, rose-tinted over a white ground.

NEW FRUIT.

Pear Mrs. Seden.—A description and illustration of this new fruit will be found on page 36.

The foregoing were shown before the Royal Horticultural Society on January 9, when the awards were made.

THE GREENHOUSE.

SINGLE-FLOWERED CHRYSANTHEMUMS FROM SEEDS.

DURING the past few years a great advance has been made in the raising of young plants of the single-flowered *Chrysanthemums* from seeds. The plants so raised are generally nice, bushy specimens, dwarf, carrying good foliage and bearing flowers freely. For the decoration of greenhouses and conservatories during the months of October, November and December the plants are extremely valuable.

How to Raise the Seedlings.—The seeds should be sown during the latter part of February or early in March. Make use of boxes so as to have plenty of space on which to sow the seeds, and distribute them thinly, then the resultant seedlings will not be too much crowded. The leaves of the young seedlings spread very much and take up a lot of room. The boxes must be about 4 inches deep; crocks for drainage are not needed, but some half-decayed leaves ought to be put in the bottom, then a very thin layer of well-rotted manure that has been passed through a half-inch-mesh sieve before the sifted compost is used for the filling of the boxes. Loam and leaf-soil in equal quantities, with some sand or grit to render all porous, will constitute a nice compost. The latter should be made moderately firm, levelled on the surface, and then allowed to dry for an hour after being watered. Sow the seeds thinly, as previously advised in this note, and cover them a quarter of an inch deep, but do not water the covering soil immediately afterwards. There should be a space at the top of the boxes about three-quarters of an inch deep. Place loose pieces of glass on the boxes, then brown paper. A suitable position for

the seed-boxes is a warm corner on a stage in a greenhouse or a heated frame. A mild hotbed in a frame is the best place for them. In the latter position the seedlings will appear before it is necessary to give water, but on a dry stage the soil will dry up more rapidly, and watering by immersion will be advisable occasionally. Directly the seedlings appear, the brown paper and pieces of glass must be gradually removed and air admitted. If the boxes are in a closed frame, the glass lights must be lowered a little to admit air.

Transplant the Seedlings in boxes as soon as they are large enough to handle freely. Fill the boxes in exactly the same way as recommended when preparing them for the seeds, but at this stage the cultivator may add a small quantity of rotted manure to the whole of the soil. Put out the seedlings 3 inches apart each way, give them water through a rosed watering-can, and place the boxes near the glass in a cool frame. At this stage the young plants resemble Celery seedlings very much.

The First Potting.—The seedling Chrysanthemums grow quickly, and before they get at all crowded in the boxes it will be advisable to pot them singly in 3-inch pots. Use a good compost, one such as is used when plants intended for the production of large blooms are being dealt with. The newly-potted plants must be kept almost airtight in the cool frame for three or four days, and carefully watered and syringed occasionally. From this stage forward treat the plants generously, but do not nurse them too much, or they will possess weakly shoots. AVON.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

VIOLETS (C. T.).—We could see nothing amiss with the flowers sent, and with "wonderfully healthy foliage and plants covered with buds" there can surely be but little wrong. All that is required is a little more patience on your part, and for the plants more sunlight and sunheat, and all will be well. At this period of the year all vegetable-life is either dormant or in sluggish mood, and Violets in frames are no exception. Another year you might improve matters a little by arranging the frame on a south or south-east border, where it would receive the benefit of the early morning sun; or, by cultivating some of the plants in pots and introducing them to a slightly-warmed greenhouse, earlier blossoms would be available.

TREATING STEEP SLOPE (Riada).—Unfortunately, you say nothing about the nature of the soil or even the position, whether in sun or shade; hence we are unable to afford you a very definite reply. Generally speaking, and seeing the Azaleas are doing so well, we should first think of Rhododendrons in groups of choice sorts, interspersed with such Lilies as *Hansonii*, *candidum*, *testaceum* and *platyphyllum*. Usually on such slopes the Rhododendron, in well-prepared soil, does well; indeed, some of the finest garden pictures we have seen have been so made, and not only provided a feature alone, but gave

just that touch of boldness and flower beauty necessary. In the circumstances you describe, you have a case on all fours with those we have in mind, and unless there are obstacles in the way that we know not of, the adoption of the suggestion we have made would be in complete harmony with what now exists. The Rhododendrons should not be planted on the sharp slope of the bank, but rather counter-sunk in flattened areas, so that the rainfall from the upper portions of the bank would reach the roots of the plants in due course.

POLYGONUM BALDSCHUANICUM (Amateur).—It is impossible to say why your plants of *Polygonum baldschuanicum* have not flowered, but it is probable that they have too free a root-run, and that the soil is too rich and too moist, and rank growth is formed instead of flowers. We advise you to place a plant or two in full sun where the soil is comparatively poor and thin, and try whether that will have the desired effect.

MANURE FOR A LAWN (Artificial).—The following manure will make a good dressing for your lawn, applied at the rate of about five pounds to the square rod: Superphosphate of lime, two parts; bone-meal, one part; and sulphate of ammonia, one part. Mix thoroughly before applying. It would, however, be advisable to give the lawn a good dressing of well-rotted manure now, and an application of the other manure in wet weather during April or May. Well-rotted manure is preferable for your herbaceous border.

CHRISTMAS ROSES (A. E. T.).—Christmas Roses established in tubs or pots would not be injured by being placed in a dwelling-room in which gas is not burned while they are in flower. As soon as the flowers are over, the plants should be placed in a cold frame to harden off; then about the end of April they should be plunged out of doors in a shady position. They will require plenty of water, both during the time they are in the frame and afterwards, while, when growth is active, liquid cow-manure once a week will do good. Do not give manure-water, however, unless the plants are thoroughly established. When first placing the plants in tubs, see that the tubs are well drained and nothing but really good, sweet, loamy soil, with a little sand, is used, for the plants ought to remain undisturbed for a number of years, as after root disturbance they are often a couple of years before they do themselves justice again. It is not possible to say how long they would continue to give satisfactory results in the same tubs, as so much depends on the skill of the cultivator.

ROUGH DRY WALL (A. D. F.).—So far as natural stone is concerned, Kentish rag or the Guildford sandstone would be the best from the point of view of cheapness and nearness to where you require it. You might for the former apply to the manager at the stone quarries, Tub's Hill, near Sevenoaks, or to Messrs. J. Cheal and Sons, Crawley, who, we believe, supply suitable stone. For the purposes of your wall, large blocks of stone are not generally required, though this naturally depends not a little upon the height and extent of the erection. By this we mean that large selected blocks are more costly, if more imposing in effect. On the other hand, thin, flat slabs are just the reverse, and frequently unsuitable to plant-growing. In all probability a little professional advice on the spot before you proceed much further would be a wise policy. Clinkered burrs are not bad if of a rustic nature and the original brick pattern has been largely eliminated. These things afford good interstices for planting, though generally they are hard, non-porous when much glazed, and often unsympathetic with the plants.

HARDY ANNUALS (A. P.).—We advise the following procedure as likely to be successful: First of all, aim at growing, as far as possible, close-growing or prostrate annuals, such as are not likely to feel the injurious effects of the sea gales, as taller ones would do. It is well to grow the *Mesembryanthemums* which are of procumbent growth, *M. tricolor*, to wit; also the various varieties of *Mignonette*, which in such a position should not grow too strongly. *Anagallis*, in variety, would also succeed. *Alonsoa*, as *A. Warscewiczii* compacta, and the dwarf forms of *Alyssum maritimum* would be certain to succeed. The dwarf varieties of *Antirrhinums*, though not strictly annuals, thrive well when treated as such. *Calandrinia*, both *C. grandiflora* and *C. umbellata*, should be tried. *Portulaca* in varied and striking colours, both single and double, would be most reliable. The dwarf-growing *Coreopsis* should do well; they flower freely in exposed situations. The dwarfest of the *Candytufts*, if sown thinly and then thinned out, should be very useful. The compact-growing varieties of the *Cornflower* and *Centranthus macrostemon* ought to be relied upon. *Dianthus chinensis* and *D. Heddewigii* should both be tried; these do well near the sea. *Dimorphotheca aurantiaca* and the *Edelweiss* are both worthy of trial. Both the *Wallflowers* and *Erysimum peroffskianum*, their near relative, are very reliable; these may both be treated as annuals by sowing early. The *Linarias* (*Toadflax*) would be a good choice, also the dwarf varieties of *Marigolds*. The *East Lothian Stock* would be much better to grow than the *Ten-week*; the former is more sturdy and holds itself more firmly in the soil. The dwarf *Nasturtiums* are excellent in seaside resorts, so also are the dwarf forms of *Phlox Drummondii*. The compact-growing varieties of the *Statice*, including *S. latifolia*, the *Sea Lavender*, should be tried. Of the annual *Asters*, the best to grow are the dwarfier sorts, and especially those with small flowers. These also transplant well. Aim at some amount of shelter, if possible, by staking any annual that grows a foot or so in height. Make use also of pieces of sandstone to steady the plants. Many thrive better in this way and are held all the firmer.

THE GREENHOUSE.

PURPLE VERBENA (Mrs. F. K.).—We are much obliged to you for calling attention to the value of *Verbena Beauty of Oxford* for bedding purposes. The most satisfactory purple-flowered kind we know is *Purple King*, while *Favourite* is a beautiful rich purple, but with a white eye.

RAISING CYPRIPEDIUMS FROM SEED (H. J.).—The best time to sow *Cypripedium* seed is soon after it is ripe; but if this happens during November or December, it should be stored in a dry cupboard till the beginning of January. For a seed-bed a well-established *Cypripedium* should be chosen, preferably one that has the soil pressed firmly round the roots and about half an inch below the rim of the pot, or most of the seed will be washed over the side during the process of watering the plant. Most of the sphagnum moss ought to be cut off, and the surface should be in a sweet condition, because no Orchid seed will germinate where the compost is at all sour. Having selected a suitable plant and prepared the surface as stated, the seed may be sprinkled thinly around the base of the *Cypripedium*. No covering is needed, and several pots can be sown, because we have found that, although given exactly the same treatment, sometimes seedlings only appear in one pot. The minimum temperature should be 65° Fahr., with a rise of 10° or so during the day if the sun is warm and bright. The greatest care is necessary when giving water, an operation best performed gently with a fine-rosed water-can, while the surroundings must be kept moist by occasionally damping the stages, &c. On no account should the plant be allowed to become dry, or failure will be the result. Germination takes place usually in two or three months; but this must not be taken as conclusive, for we know of cases where seedlings have appeared after two years. We wish you every success.

BEGONIA BUDS DROPPING (J. E. S.).—A fall in temperature is the most likely reason for the dropping of the buds and flowers on your plants of *Begonia Gloire de Lorraine*. During the flowering period a light, buoyant atmosphere is very necessary, and in the event of a moisture-laden atmosphere the effects of such a fall in temperature would be far more injurious than in a drier structure. This does not, of course, imply that the house in which they are growing is to be kept unnaturally dry, or that the plants are to be kept dry at the roots. With regard to the most suitable temperature for this *Begonia*, our experience is that it is most satisfactory when grown in a structure where a minimum night temperature of 50° is maintained. During the day the thermometer may with advantage run up to 60° or 65°. As the temperature named by you is probably taken in the daytime, your ideas in this respect are about the same as ours. There must, however, have been some decided check to account for the buds and flowers dropping as yours have done. Do you water them with cold water? If so, this may be the cause of the mischief, as the water used should be about the same temperature as the atmosphere of the house. You cannot show the white variety under the name of *Gloire de Lorraine* unless the prize, or prizes, are offered for different forms of *Gloire de Lorraine*; if for *Gloire de Lorraine* itself, the white one would be inadmissible. *Crotons* would succeed in the same temperature, but in their case a night temperature of 55° to 60° would be better. Still, the difference is not a great one.

CYCLAMEN (Moor-Hen).—The under side of the leaves sent seem to have been badly attacked by that troublesome mite which is generally termed the *Begonia mite*, owing to its having first made its appearance on *Begonias*. We cannot, however, find any trace of the minute insects thereon, but have little doubt that they are the cause of the damage, especially as the flowers on plants troubled by the mite are affected exactly as those sent by you. Furthermore, we cannot understand the under side of the leaves getting into such a state within a week, and think it must have been coming on gradually till it reached such a pitch as to come under your notice. A dry atmosphere is very favourable to the development of the mite, and owing to the excessive heat and drought of last summer it has in many instances given trouble where none has been previously experienced. We cannot think the manure-water is to blame, otherwise the roots should show the effects thereof. By dipping in a solution of nicotine, or vaporising with the X L All Vaporiser three or four times at intervals of a few days, the pest can be destroyed; but, of course, a good deal of the mischief is already done.

CARNATIONS (M. R.).—You ask which are thought most of, Carnations with smooth-edged petals or those whose petals are fringed at the edges? We cannot say. There are those who advocate and admire both, though flowers having fringed petals were for a long time not tolerated by the older school of florists. The florists' ideal of a good petal was a perfectly smooth edge, and there are many such among the so-called "class" flowers shown on boards to-day. Many border Carnations otherwise good are inadmissible in the above classes because of the obscurely indented edges of their petals. On the other hand, the great majority of the so-called American Carnations have decidedly fringed petals, and the fact that these are grown by hundreds of thousands, or probably millions, to supply the markets of the world is the best proof of their universal popularity. These latter require greenhouse treatment, however, while many of the border kinds are quite hardy. Some good varieties are *Lady Hermione* (salmon), *Mrs. Robert Morton* and *W. H. Parton* (apricot shades), *Trojan* and *Mrs. Eric Hambro* (white), *Liberté*, *Mrs. Francis Wellesley* and *Sir Launcelot* (fancies), *Lady Hindlip* and *Robert Berkeley* (scarlet), *Daffodil* and *Solfaterra* (yellow) and *Duchess of Wellington* (lavender). *Leander* is of salmon colour, and belongs to the border class. Thrips are minute insects and abound in nearly all flowers and plants. They are usually of a dark colour, and easily detected with a magnifying-glass.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Dahlia Conference.—A conference on Dahlias will be held in connection with the National Dahlia Society at Carr's Restaurant, 264, Strand, on Friday, March 8, at 6.30 p.m., when some interesting papers relating to Dahlia culture will be read.

Perpetual-flowering Carnations.—A conference in connection with the exhibition to be held on March 21 at the Royal Horticultural Hall has recently been arranged by the committee of the Perpetual Flowering Carnation Society. Full particulars of this will be published in due course.

Honour for Mr. Harman Payne.—For many years past, our contributor Mr. Harman Payne has occupied the unique position for an Englishman of being a regular correspondent to the French gardening Press. In recognition of his services, the French Government has just bestowed upon him the Palmes Académiques, a decoration which carries with it the title of Officier de l'Instruction Publique. It will be remembered that Mr. Payne has already been successively Chevalier and Officier of the Order of the Mérite Agricole.

Our Sweet Pea Number.—Following our usual custom at this season, we shall devote the greater part of our issue for February 3 to articles on the Sweet Pea. This flower is now so universally grown, and so many requests for information relating to it are made, that we feel sure a Special Number will be appreciated by the bulk of our readers. We have had prepared a number of articles of more than usual interest by the leading growers and exhibitors of Sweet Peas, among them being Mr. F. J. Harrison of Ulverston, Mr. Thomas Stevenson, Mr. G. F. Drayson, Mr. Horace J. Wright and Mr. E. H. Christy. Professor Biffen, the Rev. J. Jacob and Miss Philbrick will also contribute articles. In addition, there will be a coloured plate of four excellent varieties of Sweet Peas, and a new and unique portrait of the president of the National Sweet Pea Society. The price of this special issue will, as usual, be one penny.

Cyclamen Coum Among Grass.—The various hardy kinds of Cyclamen are among the prettiest plants imaginable for the wild garden, for, apart from their showy flowers in spring, summer, autumn or winter, as the case may be, their leaves also offer an attractive feature. It does not often happen, however, that they are planted among grass, yet C. Coum thrives well and is very effective when placed in such a position. Some years ago it was noted in a Cornish garden occupying a large area on a lawn where the ground was comparatively light and loose; and quite recently a batch of plants growing among grass recalled the more

extensive Cornish plantation to mind. As the red flowers appear from January onwards for two or three months, they form a pleasing contrast to the whites, yellows and blues of various low-growing bulbous plants which bloom at the same time.

A Good Winter Greenhouse Heath.—For several weeks past the South African Erica melanthera has been one of the most notable plants in the greenhouse at Kew, both on account of its floriferous character and from the unusual manner in which it has been grown. As a rule, the cultivation of Ericas in pots is attended during the early stages with much stopping of the shoots; but in the case of the plants under notice this stopping has been dispensed with, and the plants have run up with single stems to a height of 3 feet or more. They have, however, branched freely, and are uniformly furnished with side shoots from base to summit. At their widest part they are a foot or more in diameter. As all the side branches are young and strong, flowers are borne with great freedom. The pots used for the plants are 6 inches in diameter; therefore there is no appearance of over-potting. As this is possibly the strongest constitutioned of the various South African Ericas, it ought to be more frequently met with.

Pensions for Aged and Infirm Gardeners.—As will be seen by a report which appears on another page, that most praiseworthy and national charity, the Gardeners' Royal Benevolent Institution, continues to carry on its good work in providing pensions for aged or infirm gardeners or the widows of gardeners. Altogether, including twenty-two put on the funds last week, there are now 254 pensioners under the care of the institution, necessitating an annual outlay of over £4,000, the greater part of which is subscribed annually by those who give a thought to gardeners who are no longer able to work, and by gardeners themselves. Unfortunately, the committee, which is a purely honorary one, is annually faced with far more deserving candidates than it is possible to place on the funds by election or otherwise. This year there were seventy-one approved candidates, and only twenty-two could be granted pensions. We appeal to all our readers who enjoy their gardens to spare a thought to those who have in the past done so much to give us pleasure by cultivating flowers, fruits and vegetables, and who, through no fault of their own, have fallen on evil days. Gardeners, too, should remember that it is an excellent security against misfortune to subscribe to the institution. Those who feel they would like to give something towards this thoroughly deserving and economically-worked charity should write to the secretary, Mr. George Ingram, 92, Victoria Street, Westminster, who will be pleased to furnish full details of the work that is done.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Cæsalpinia Gilliesii.—What a pity it is that this plant, illustrated on page 4 of THE GARDEN for January 6, is so seldom seen in our gardens! It has proved to be quite hardy with us planted against a west wall close by the entrance to the house, and last summer won admiration from all who are interested in choice shrubs. The roots of the plant are beneath big flagstones. It has reached a height of 10 feet to 12 feet in nine years, and has flowered on every growth and produced ripe seed-pods, which have been sown and are growing. It is also called *Poinciana Gilliesii*.—W. D. POPE, *King Barrow, Wareham*.

Erica gracilis.—This Heath, of which the pink form is illustrated on page 11, is one of the most useful members of the genus, and also one of the most variable. The typical kind has been grown for many years, and so has the variety *vernalis*, which is of denser growth and later in flowering than the ordinary form. The pink variety, which is very beautiful, does not seem to be much known, but the white kind, *nivalis*, is a universal favourite. It originated from the type, and its sportive character is frequently seen by some of the shoots producing coloured blossoms. *E. gracilis* is one of the least exacting in its cultural requirements of the various greenhouse Heaths, and both this and the white variety are largely grown as flowering examples in miniature pots, which may be so frequently seen in the florists' shops.—H.

Snow and Seeds.—It is surprising to see how rapidly some seeds appear to germinate after being exposed to a fall of snow, and how frequently those which have delayed long in their germination begin to grow in the first mild weather after the snow. This was well known to past generations of gardeners, and it is not uncommon to see references to this in some of the older horticultural works. It has been found that some of the *Primulas* and *Gentians*, for example, which may be naturally slow in their germination under ordinary treatment, come up very quickly after a snowfall. *Auriculas* are a case in point, and we find that pots or pans of seeds of *Primula japonica*, and even those with seeds of the common *Primroses* and *Polyanthuses*, spring rapidly when the snow has cleared away from them. Some have even found it useful to take snow from the open and place it on the pans or pots under glass, but the benefit is not so pronounced, as the snow melts much more rapidly.—A. M. D.

Sparmannia africana.—The summer of 1911, which was responsible for many unusual doings in the plant world, was particularly suitable for this *Sparmannia*, which is now flowering with unwonted freedom. It is a plant well known in gardens; but a most important feature of its culture is not always recognised. That is, in order to obtain a good display of bloom during the winter, it should in the latter part of the summer be fully exposed to the sun out of doors, and the hotter the sun the more flowers there will be. Of course, it must be kept properly supplied with water at that period. The flowers, which are borne in loose clusters, have spreading white petals, but their most notable feature is the brush-like cluster of long stamens, in colour purple and gold. The *Sparmannia* is a near relative of *Dombeya Mastersii*, recently figured in THE GARDEN.—P.

Euphorbia Wulfenii.—I notice in THE GARDEN for January 6 a note on the above plant by Miss Jekyll implying that it is an uncertain one to flower. I can only say that with me, since my plants reached a flowering age, they have been covered with blossom with commendable regularity. They are in heavy soil, somewhat sheltered, with south exposure.—ARCHIBALD BUCHAN-HEPBURN.

The Variegated Rock Cress.—There are two variegated forms of *Arabis albida*, one with gold and another with silver variegation. Then there is a variegated form of the double *Arabis alpina* fl.-pl. Besides these there is the variegated Rock Cress mentioned by "A. D.," i.e., *Arabis lucida* variegata. It is not so easy to grow in the South, and likes a stronger soil than the preceding three. In addition, there is a small one with variegated leaves, *Arabis procurrens* variegata, but this is not often met with, though rather a nice little plant. I observe one catalogued as *A. bellidifolia* variegata, but I have not met with the Daisy-leaved Rock Cress in a variegated form, and have a strong suspicion that the one offered may be simply *A. lucida* variegata. I can assure your correspondent that there are variegated forms of *A. albida*.—S. ARNOTT.

Lilium Martagon album.—An interesting note on the question of the white forms of *Lilium Martagon* reached me recently from a well-known and most capable trade grower of hardy flowers. It was suggested by a note I wrote some time ago regarding the fasciated and normal form of *L. Martagon album*. My correspondent informs me that the fasciated one comes from the Continental form of album, and he mentions having first seen this in a Scottish nursery which is no longer in existence. I saw the same stock, and learned that it was received originally from the Continent—Holland, I believe—but I long knew this fasciated form in a cottage garden, where it has been for very many years, and also in an old country house garden, in which it must have been for generations. It is a worthless, or almost worthless, variety. My correspondent has two varieties, that called *L. M. album punctatum* being the tallest and that called *L. M. superbum* the finest. From experiments with seeds of the latter he is of opinion that it is originally a sport or seedling of *L. M. dalmaticum*. I must say that its appearance gives considerable support to the opinion he expresses.—S. A.

Apple Scab.—Scab, or *Fusicladium*, is a fungoid disease of Apples and Pears which seems to be on the increase. It is found on bark, leaves and fruit. On the young twigs it roughens the surface and checks the flow of sap; on the leaves and on the young fruit it forms ugly brown blotches, the fruit often cracking because the disease stops the natural expansion of the skin. It cannot easily take possession of smooth-skinned fruits, such as Lane's Prince Albert Apple or Conference Pear, but it fastens on fruit with rougher skins, and has ruined many fine plantations of Cox's Orange Pippin Apple and Doyenné du Comice Pear. The usual remedy is a two-fold application of Bordeaux mixture, the first dose being applied when the flower-stalks become visible, and the second when the fruit is formed. A suitable strength is 12lb. of bluestone and 8lb. of quicklime to 100 gallons of water. The writer has found some benefit from the use of a caustic wash. He used V1 Fluid and a strong Bordeaux mixture of 50lb. of bluestone and 30lb. of quicklime to 100 gallons of water on alternate lines of the same varieties

of trees in winter, with the result that the trees washed with V1 Fluid were certainly more free from scab than the others. It would be most interesting and useful to hear the results of the experiments of others.—E. M. BLACKBURN.

Flowers Early in the Year.—The mildness of the season here and the absence of frost have brought quite a number of flowers out much earlier than usual, and among those noticed last week were *Cyclamen ibericum*, *Muscari azureum*, *Iris Tauri*, *Galanthus Whittallii*, *Eranthis hyemalis*, and (in a cold frame) *Irises Histrio* and *histrioides*; while such things as *Galanthus cilicicus*, *Jasminum nudiflorum* (a perfect picture this year), and *Iris stylosa* have been out for a month or more. Of the latter we have cut upwards of a thousand blooms from a row against a south wall about six yards long.—EAST SUSSEX.

Pear Backhouse Beurre.—In reference to an enquiry concerning this Pear in a recent issue of THE GARDEN, Messrs. James Backhouse and Son, Limited, York, write that this variety was the product of a graft of *Beurré Diel* upon a *Jargonelle*, made by the late Mr. James Backhouse over fifty years ago. In habit of growth it has much of the upright shoot of the *Jargonelle*, while the foliage has more the appearance of the *Beurré Diel*. The flavour is much more that of the *Jargonelle* than of the *Beurré Diel*, and it is very sweet and juicy. It is a true October Pear, coming in between the two kinds. From its large size, excellent quality and great productiveness and hardiness it can be thoroughly recommended for general cultivation.

Reinwardtia trigyna.—A bright feature in the warm greenhouse is furnished by this old-fashioned plant (it was introduced from India in 1799) in the warm greenhouse. It is fairly well known in gardens, but more frequently under the name of *Linum trigynum* than that of *Reinwardtia*, which is now regarded as the correct one. The plant in question is of a half-shrubby character, and bears small clusters of rich yellow flowers over an inch in diameter. It is naturally of a branching habit and flowers profusely. A second species, less known than the preceding, is *Reinwardtia tetragyna*, with pale yellow flowers. It is not so effective as the other. Both these plants are amenable to the same treatment. In summer they do best in a cold frame, as if grown in heat or where the atmosphere is at all dry they are liable to be attacked by red spider.—H. P.

Crowea saligna.—This pretty, hard-wooded plant flowers during the autumn and winter months; in fact, it is in the greenhouse still in full bloom. It forms a freely-branched shrub, whose rather long shoots are clothed with Willow-like leaves and studded for the greater part of their length with bright pink flowers about one and a-half inches in diameter. It is a native of New South Wales, has been introduced over a century, and in the days when hard-wooded plants were popular it was grown much more than it is now. Pretty little examples can be cultivated in 5-inch pots. A second species, from Western Australia, is known as *Crowea angustifolia*. In this both the leaves and flower segments are much narrower than those of *C. saligna*, while it principally blooms in the spring. *Crowea saligna* is sometimes known as *C. latifolia*. A mixture of peat and sand suits them well. It is very essential that the pots be well drained and the potting compost pressed down firmly.—T. H.

Onions During Dry Weather.—It seems somewhat remarkable that where many crops last summer were either a partial or complete failure, owing to drought, the Onion crop here should have been so good. The ground for the Onions in question was deeply trenched in early winter, and a liberal dressing of wood-ashes worked in (about three cartloads to six rods of ground) and no manure. The ground was forked over again later, made firm, and the seed sown early in March. As soon as the young seedlings appeared, the hoe was put through the rows, and also at frequent intervals all through their growth. This surface stirring is of the utmost importance. We thin to 6 inches apart. The soil here is very heavy, and Onions are usually inclined to make thick necks. Last season, however, suited them well, the tops seeming to help the bulbs in the dry weather. No bending over was necessary, the crop harvesting splendidly. The varieties grown were Rousham Park Hero and Bedfordshire Champion.—F. MARSHALL, *Willesden*.

Japanese Irises in an Amateur's Garden.—That which was just a narrow water-course 4 feet wide has been transformed into a pond, the home of many of the popular *Nymphæas*, while on the side Japanese Irises, planted in the autumn of 1910, are growing. The illustration shows the result after the second year of planting. This bank contains 200 clumps, and when in flower an exceedingly pretty effect is produced. The colours are various and well mixed. This Iris stands out as one of the most charming occupants of our modern gardens. The position chosen is very much exposed to the east, but they thrive splendidly. The preparation of the soil involved but little expense. Previously it was a mass of Rushes and rough grass; this we cut up into pieces with an old hay knife and placed it a good depth below the water, and I am happy to say we have seen nothing of it since. The soil at the bottom was nasty, sticky mud brought up from a depth of 4 feet. After trenching, the surface was covered with ashes from the fire; these were forked in and the whole left to dry for some weeks, after which a dry day was chosen for the planting. In the spring every clump showed signs of growth, and eventually all were covered with short manure, which was forked in.—W. D. POPE, *King Barrow, Wareham*.

Depth to Plant Fruit Trees.—An interesting demonstration as to how deep Apple or Pear trees worked on the Paradise or Quince stocks should be planted was presented to me in Messrs. Bunyard's Allington Nursery last autumn, when, with numerous others interested in fruit culture, including Messrs. Owen Thomas, G. Woodward and J. Willard, I visited that nursery and was shown a huge breadth, several acres in extent, of bush Apples, all worked on the Paradise, which had been planted some ten years. Better or

healthier trees carrying more superb crops of fruit no one ever saw, yet all these were originally planted low enough to enable the union to be buried. One reason for such deep planting is the belief, which may or may not be correct, that roots are emitted from the union direct from the stem of the grafted tree, and that through such agency additional strength is given to the tree. A further reason is that just burying the union in the soil not only serves to keep it cooler in the summer, thus facilitating swelling, but also provides some protection from sharp frosts in the winter. Soon after the late James Douglas went to reside at Great Bookham, he had a couple of dozen Apple trees on the Paradise stock and planted them. Some two years later he wrote to the nurseryman that the trees made no growth. On examination it was found that the trees were planted so shallow that the union stood 6 inches above

THE KITCHEN GARDEN.

EARLY BROAD BEANS FROM SPRING SOWINGS.

MANY amateurs and others do not care for the Broad Bean when there are plenty of other good vegetables later in summer; but early in the season this useful crop is appreciated when the pods are young and the Beans small and tender. The Early Green Pod, before it is fully matured, is little inferior to Green Peas, and the culture is quite simple. There are several forms of Green Pod Beans, and in my opinion the largest are by no means the best if quality is the first consideration. At the same time, even the longest pods of the largest varieties if cooked young are not to be despised.



JAPANESE IRISES IN MR. POPE'S GARDEN AT KING BARROW, WAREHAM.

the ground. He was advised not to lift the trees, but to have the stems moulded up with old pit soil above the junction. The result was remarkably robust, healthy growth and fruit. No doubt a great deal depends upon the character of the soil and the kind of stock on which a tree is grafted.—D.

FORTHCOMING EVENTS.

January 27.—Chester Paxton Society's Meeting. Lecture at 8 p.m. by Mr. J. D. Siddall on "Notes and Pictures of Summer Holidays from a Paxtonian Point of View." Illustrated by lantern slides.

February 1.—Linnean Society's Meeting.

February 3.—Société Française d'Horticulture de Londres Meeting.

February 5.—National Chrysanthemum Society's Annual Meeting at Carr's Restaurant, Strand, 7 p.m.

Many years ago it was, and in some gardens it is still, the rule to sow the Broad Bean late in the autumn for the first crop the following season; but the advisability or otherwise of this depends upon the soil and season. Frequently there are serious losses from such a course. Among the worst enemies the plant has to contend with are mice, which burrow under the plant and eat the succulent Bean or seed. I have in very severe weather lost the whole plant just above the ground-level, in spite of timely protection, so that under the circumstances there is no gain, but often loss of time. This last can be remedied by

Sowing in Pots and Boxes in January or early February, according to the locality, and planting out strong plants, say, some six weeks later, not forgetting to well earth them up at planting-time to protect the stems. I have found it beneficial to plant in a rather deep drill, as this protects the plant at the

start. Seed sown in small pots, three seeds in a 3-inch pot, plant out well, as it is not necessary to place any drainage in the pots other than coarse manure, and over this good loamy soil. This is useful where small quantities only are required. For larger supplies, shallow boxes answer well, care being taken that the seeds are not sown too closely together, each plant may then be lifted out for transplanting with a good ball of earth and roots. Sow in rather rich soil made firm, so that sturdy growth is secured at the start. After sowing, place the pots or boxes in frames or houses. One good watering will usually suffice till the plants are through the soil, when they should be placed near the glass and ventilated freely in favourable weather. When large enough, harden by exposure for planting. Few, if any, vegetables transplant better than Broad Beans.

Some Good Early Varieties.—There are numerous varieties of Early Green Longpods under diverse names, but most of them are suitable, and though some are termed large growers, I have not found them any too large. The old Green Longpod is a well-known early and prolific variety, and I prefer this to the smaller Early Mazagan and Beck's Dwarf Green Gem; but both of these should not be despised, as they are the earliest to mature and very hardy. I have grown other varieties, but the above are best for first supplies. G. WYTHES.

THE FLOWER GARDEN.

THE SPRING SNOWFLAKES.

SOME day the hybridiser will take in hand the Spring Snowflakes—varieties of *Leucojum vernum*—and will do for them what has been done for the Daffodils and the Snowdrops, and give us flowers of still greater refinement and beauty. This seems almost impossible when we study the innate grace and beauty of these Snowflakes; yet experience of what has been done with other flowers forbids the thought that they cannot be improved in any way, and encourages the belief that it may yet be done.

We need not, however, wait until that has been achieved, for these Snowflakes are lovely enough and useful enough to have a claim upon us which cannot be thrust aside, and calls loudly for their admission into the best gardens of the spring. Of greater wealth of beauty than the Snowdrop, they have yet its purity and almost all its grace, while their equal reliability in our gardens lends strength to their appeals to us. They are ever growing in favour, and the time will come when every spring garden will have many of these flowers among its best-admired treasures. Yet there are many who do not know these charming flowers, and these would act wisely were they to order from their bulb-dealer at least a few of the Snowflakes in the autumn.

While all the Spring Snowflakes belong to one species in the eyes of botanists, and are varieties of *Leucojum vernum*, there are three well-marked forms, as well as a few with minor variations, not worth mentioning from a gardening standpoint. These three, however, are sufficiently distinct to be worth owning in every garden. The first of these to bloom is that which botanists tell us is a variety of *Leucojum vernum*, called *L. vernum* Wagneri. This, Wagner's Snowflake, is a very fine form, coming at least a fortnight, and sometimes a month, before the others. It is often in bloom

early in February, and sometimes anticipates that time. It is taller than the others, and the great majority of the plants bear two flowers on one stem. These flowers are larger, and have the beautiful green spots at the apex of each segment of a deeper colour than the others. This I consider the finest of the Spring Snowflakes. It is sometimes sold as *L. carpathicum*, so that those seeking it should stipulate for obtaining the robust, early-flowered, twin-bloomed form.

The typical *Leucojum* is in itself a lovely flower, with its white satin-like blooms of a fine, broad, bell shape, each segment having the characteristic green spot on the exterior, which adds so much beauty to the bloom. It varies slightly in depth of green, but is a feature of great attraction in every way. Growing a little more than 6 inches high in some soils, this plant becomes a foot or so in height in others.

The third variety I shall mention now is one with yellow instead of green spots. This is a charming little plant, and, much as we admire the green markings of the type and think that it cannot be surpassed in charm, we also appreciate the yellow markings and the yellow ovaries of this one, which is the true *Leucojum carpathicum* of Herbert. It is a dainty little plant, hardly so robust as the one with green spots, but a great beauty withal.

The cultivation of these Spring Snowflakes presents no difficulty. They grow well in almost any soil, preferring possibly one of a rather good loam and sand. They thrive in sun or partial shade, and when they become more plentiful will rival the Snowdrop for planting in great masses for a good garden effect. They make finer and more vigorous plants if rather deeply planted, say, from 4 inches to 6 inches or 8 inches deep; the lighter the soil, the deeper the planting required. The bulbs are comparatively cheap, and as they increase freely from offsets, they soon form a nice feature in any garden or grounds. The bulbs should be as short a time out of the soil as possible, and are purchased and planted in autumn.

Dumfries.

S. ARNOTT.

THE BRODIAEA AND ITS CULTIVATION.

I READ with much interest the Rev. Canon Bernard's article, "Our Garden Flowers in California," which appeared in THE GARDEN some months ago. I was specially interested in the news that a complete flora of California is in course of preparation. An authoritative work on the whole of that part of America which lies west of the mountains is badly wanted.

It seems that the genus *Brodiaea* has not yet emerged from a state approaching chaos. It is still confused with the genera *Calliprora*, *Triteleia* and *Milla*, and individual species have vexatious synonyms. *Brevoortia coccinea* is down in every florist's catalogue I have come across under *Brodiaea*. Dr. J. C. Willis, in "Flowering Plants and Ferns," mentions thirty species, evidently including the genera mentioned above, but not *Brevoortia*. A small collection obtained from Messrs. Barr in the autumn of 1910 gave an insight to the beauty of these liliaceous plants, although my experiment resulted in partial failure. I was especially struck with the non-fugitive character of the blossoms, cut sprays lasting in water for a fortnight.

My plants of *B. congesta*, *B. ixioides* and *B. hyacintha* were lost through slugs, and as the plants apparently only make two leaves, the mischief was not long in the doing. Several leaves which

survived shrivelled away, but the same fate overtook some of the plants of *B. multiflora*, which ultimately threw up fine heads of flowers. *B. multiflora* was in blossom on May 21, and I had a nice clump of these compact umbels of waxy lilac flowers. The beauty of *B. laxa* was a revelation, the delicately poised campanulate blossoms lasting so long in condition. This began to bloom on May 28.

B. murrayana was in bloom on June 22. Robinson ("English Flower Garden," second edition) mentions this as a variety and an improvement on the type *laxa*. In my hands it was not so; the plants were stumpy in comparison and the darker colour of the blossoms less pleasing. *Brevoortia coccinea*, sent as a *Brodiaea*, towered above the others with its curious crimson and green flowers, the tips of the reflexed lobes showing creamy white.

They were all planted in sandy soil under a south wall, but in this warm corner of Devon they seem to want a soil of some stability, but well drained.

STANLEY CHIPPERFIELD.

Ottery St. Mary, Devon.

A BEAUTIFUL LILY.

LILIAM AURATUM RUBRO-VITTATUM, which is one of the most striking of all the varieties of the Golden-rayed Lily, is being sent now in considerable numbers from Japan. The bulbs are, as a rule, smaller than those of the ordinary *L. auratum*, but they travel well, and in most cases can be depended upon to flower in a satisfactory manner. This variety is now fairly well known, hence it will suffice to mention that the golden band down the middle of each segment, which forms such a notable feature of the typical kind, is here replaced by a bright crimson one. On first expansion the colour is intense, but should the weather be very hot at the time, it changes to more of a brown paper hue. It is, however, exceedingly beautiful when fresh, and bulbs are now sold at a fairly cheap rate. A companion variety, which, however, appears to be getting scarcer of late, is *Wittei*, of a clear unspotted white, with a central stripe of yellow. It is also known as *virginale*. H. P.

PHLOX DIVARICATA AND ITS VARIETIES.

THE type of this beautiful Phlox has been grown in gardens for over one hundred and fifty years. It grows from 1 foot to 15 inches high, and is well worth a prominent place in the front of a border or in the rock garden. Very free-flowering, as evidenced by the illustration on page 45, it is effective in April and May with large pale blue flowers, the petals of which are notched at the apex. There is another form in cultivation which goes under the name of *P. canadensis*, which has somewhat smaller but darker-coloured blue lilac flowers. Beyond colour, however, there is no difference between the two.

A few years ago another variety of this Phlox was introduced by Mr. Amos Perry, and was called *P. divaricata* Perry's variety. Its correct name, however, is *P. d. Laphamii*, and its distinctive character is that the petals are rounded or entire at the apex, and not notched as in the type. It is more robust and taller-growing, very free-flowering, and in all respects a great improvement on the others. There is also a variety with almost white flowers.

Like many other members of this family, *P. divaricata* and its varieties fully appreciate a

rich and deeply-cultivated soil, but it is not particular as to position as long as there is plenty of vegetable humus in the soil. It is found growing naturally in damp woods in North America. W. I.

THE ROSE GARDEN.

ROSES AND CLEMATISES ON FENCES.

THESE two beautiful subjects run well together, and the Clematises provide shades of colour not found among the Roses. The same preparation of soil required for the Rose also suits the Clematis, so that if the border be well prepared, luxuriant growth follows. I would advise a fence made with rustic wood, the pieces being placed rather close together. Such a fence would screen off the Rose garden very effectually, and act as a shelter at the same time. I think the better class climbers, such as Mme. Alfred Carrière, Dr. Rouges and W. A. Richardson, would be more suitable than the ramblers, although such as Tausendschön would be admissible. Then the Clematises could include such well-known sorts as Jackmanii, Lady C. Neville, Mrs. George Jackman, Star of India, Gipsy Queen, Nelly Moser, Marcel Moser, William Kennett and Henryii. If possible, procure the Clematises from a source where they are grown on the cool system. There has been quite a disease among Clematises this last decade, and most authorities are agreed that it is brought on by the forcing process in rearing the plants. If they can be procured on their own roots, so much the better. As to pruning, this need present no difficulty. The Clematises will require but little, and the Roses can have the old wood removed with Clematis growths attached without doing serious injury to the latter.

ROSA WICHURAIANA AND ITS FRUITS IN WINTER.

THE fruit which at the time of writing (January 16) makes this beautiful Rose so conspicuous is no mean feature. Procumbent though its nature is, yet when tied up to a 5-foot pole the pendulous growths, adorned with the large clusters of its bright seed-pods, are almost as showy as those of *Cratægus Pyracantha*. It is a species with quite a history, and most readers know that to it we owe the numerous group of *wichuraiana* Roses, of which the well-known Dorothy Perkins and Alberic Barbier are representatives. Authorities differ as to the correct naming of this particular species. Some say it should be *R. Luciae*, others *R. wichuraiana*. I believe the Kew authorities say there are two distinct species, but that they have no plant of "*R. Luciae* apart from *R. wichuraiana*." I am afraid the name has now become too familiarised to allow of any alteration, even supposing *R. Luciae* does eventually prove to be the correct name.

How strange that the species should have been known some twenty years before the hybridist took it in hand! This compels one to believe

there are other species capable of being worked upon in a similar manner, with probably equally startling results. It was left to an American gentleman, Mr. A. W. Manda of Harvard Botanic Gardens, to give us the first crosses in Jersey Beauty, Gardenia and some others, and he was soon followed by M. Barbier in France, Mr. Walsh in America, and some other hybridisers, including Messrs. Paul and Son of Cheshunt, these latter gentlemen evolving quite a distinct break in their dwarf perpetual-flowering *wichuraiana* Teas, obtained by crossing Tea Roses with *wichuraianas*.

I am sanguine enough to think that even other types will yet be obtained, probably the long-desired perpetual-flowering rambler, through crossing climbing Tea Roses with *wichuraianas*. It is to be hoped, too, that the desirable quality of evergreen foliage will not be overlooked, for the next best thing to seeing an arch or pergola of bloom till late in the year is to see one with glossy foliage well through the winter, and this, so far,



PHLOX DIVARICATA GROWING ON A BANK.

is wanting, except in two or three, such as Jersey Beauty and Edmond Proust. I really think there is some *wichuraiana* blood in American Pillar, for it has not only the procumbent instinct, but its foliage is glossy and well maintained throughout the winter. This and the old variety Aimée Vibert are two of the most evergreen in my collection.

I think, perhaps, it might be a good plan to cross some of our perpetual-flowering, dwarf-growing Polyantha Roses, such as Perle d'Or and Canarienvogel, with the *wichuraiana* types in order to obtain perpetual-flowering *wichuraianas* bearing large clusters of flowers. Most of the sorts that flower a second time produce their blooms in twos and threes, and are not very effective. Others that yield clusters are not very rampant, these being obtained, I imagine, from Herr Peter Lambert's beautiful perpetual-flowering Rose Trier, which is grand in its way, but not suitable for an arch or pergola.

THE GREENHOUSE.

SEASONABLE NOTES ON AURICULAS.

WHY are Auriculas banned from the majority of amateurs' gardens? It is well within the bounds of possibility that some enthusiastic cultivator will retort by affirming that the question is wholly beside the mark, for the reason that they are not banned; but it will take much to convince me of the truth of that statement. I am of opinion, and have been for several years, that Auriculas are neglected, and I am anxious to learn the reason. In the two groups—show and alpine—are to be found some of the most refined and exquisite of flowers, and the plants are so exceedingly accommodating that they can be as successfully grown in the smokiest town as in the cleanest country garden. There was a time within my memory

when they were far more frequently seen, and as much pleasure was found in their possession as is now apparent in that of the Sweet Pea; but it is not the case to-day, and I think that the fact is to be regretted. Whether the National Auricula and Primula Society could do more than it is doing at present to restore the plant to the popularity which it erstwhile enjoyed, and to which it is entitled, is not for me to say; but I do know that save for the annual exhibition and the general meeting one hears little about it. However, if others will not do their part, the Editor of THE GARDEN will do his, and it is intended to publish at intervals brief notes on the plant, in the hope that they will encourage its extended culture.

Plants in Frames.—Although the Auricula is a hardy plant, the wisdom of keeping plants in frames or cool greenhouses, the former for preference, throughout the winter at least, cannot be doubted. One has then complete control over the amount of water that will reach the roots,

and this is an important point, for more harm will follow excessive wetness than severe frost. To all intents and purposes the soil in the pots should be dry in frosty weather, but this ought not to be carried to the point of dustiness; therefore, prior to that condition prevailing, water must be given. Light is essential to perfect health, and for that reason the glass of the structure in which the plants are growing should be kept scrupulously clean. Accumulations of moss on the surface of the soil in the pots are not desirable, as they prevent the admission of fresh air. When they are seen, scrape them away with the haft of the budding-knife or a flat piece of wood.

Seed-Sowing.—Those who desire to raise a stock of plants from seeds cannot do better than make a start towards the end of February, and between now and then the seeds should be purchased from a source of the highest repute. Collections of both show and alpine varieties can be thus started; but when the novice has come to appreciate the charms of the flowers, he will see the necessity for buying plants of the finest sorts with which to form the nucleus of a splendid set. At the outset it may be well to remind readers of the irregularity of germination which characterises the *Primula* family. Having this fact in view will impress the importance of thin sowing, because this will facilitate the removal of the seedlings from the pots without disturbing seeds which have not started. A distance of not less than 2 inches ought to be allowed from seed to seed, and if a little more space can be provided, so much the better. The pots for seedlings must be abundantly drained, and the compost of loam, leaf-mould and sand should be moderately firm and quite level on the surface. Covering in may be to a depth of an eighth of an inch or so, and the soil must be kept moist by the dipping of the pot and not by overhead watering. After sowing, the pots—these are preferable to pans for *Auriculas*—may be stood in any convenient position in the greenhouse or frame, and in no circumstances is it wise to try to rush the seeds or seedlings along, as steady, natural progress brings the greatest satisfaction.

THE GREENHOUSE WINTER SWEET.

(*ACOKANTHERA SPECTABILIS*.)

AMONG the number of plants that require the conditions of a warm greenhouse, there are probably few more useful or worthy of cultivation than this *Acokanthera*. Besides being among the easiest of plants to manage, it also has the good properties of forming a handsome evergreen shrub of a compact, bushy habit, which produces its flowers during the winter and early spring months. The pure white, deliciously fragrant flowers are freely

produced in axillary corymbs towards the end of the branches, thus often forming a dense spray upwards of a foot in length.

A. spectabilis is a native of South Africa, and, like many other plants from that country, will not thrive when treated strictly as a greenhouse plant; but given the conditions of an intermediate house with a minimum temperature of 50° in winter, it will flourish and produce quantities of its beautiful *Ixora*-like flowers. Cuttings of the firm, young shoots root readily when inserted in sandy soil during April and May; they require to be placed in a propagating-case with bottom-heat. As the young plants are disposed to grow up somewhat



FLOWERING SPRAY OF THE GREENHOUSE WINTER SWEET
(*ACOKANTHERA SPECTABILIS*.)

thin, attention must be given to stopping; this will ensure obtaining a well-balanced plant. Large specimens can be grown in 12-inch pots, using a compost consisting of equal parts of rich loam, peat and leaf-soil, to which a good proportion of coarse sand should be added. In gardens this plant is occasionally met with under the name of *Toxicophlæa spectabilis*.

Owing to the fragrance of its flowers it is also sometimes called the Greenhouse Winter Sweet. For this feature alone the plant is well worth growing where a suitable temperature can be provided, and its season of flowering is a further inducement to many to undertake its cultivation.

In a cut state the flowers would be delightful in a living-room, a few sprays being ample for a room of ordinary dimensions.

W. T.

TREES AND SHRUBS.

INTERESTING SHRUBS IN SEASON.

Hamamelis mollis.—Your correspondent in the issue for December 30, 1911, has already referred to the merits of this charming shrub, and left but little for me to say, did I wish to, in regard to its charms. My reason for alluding to it is because of the apparently unusual lateness in flowering of our plant. It is represented here by a very fair specimen 5 feet or more in height and 3 feet to 4 feet through, and when in flower is a perfect picture. At the time of writing, however (January 12), the earliest flowers are just expanding, which seems contrary to expectations after such an unusually hot season last year. The growth is well set with flower-buds, and promises well, but in 1910 it was almost in full flower at Christmas. What is the behaviour of others?

Parrotia persica.—Belonging to the same Order as the above, but not quite so showy, this plant is, nevertheless, one of the most interesting objects now to be found in the shrubbery. Here we have several specimens which take the form of standard trees, though it may be seen in the form of a pendent bush, and also makes a desirable subject for a wall. This subject is certainly flowering earlier, and the woolly buds in many cases have already revealed the crimson stamens, which are quickly detected when caught by the sunlight. Its chief attraction, however, is its beautifully-coloured autumn foliage.

Lonicera Standishii.—Though not showy, the small flowers of this Honeysuckle are delightfully fragrant, and are certainly welcome at this early date. The shrub is quite hardy. Another variety named *L. Standishii lancifolia*, one of Mr. Wilson's introductions, is also flowering, and resembles the type except for the lanceolate leaves, which are quite distinct.

Chimonanthus fragrans.—Though this winter-blooming shrub, with its exquisitely sweet-

scented flowers, is best accommodated with a wall, it is flowering well as a bush plant in the shrubberies and in our cold clayey soil. To improve the shape and also to promote flowering wood for another season, prune as soon as possible after the flowers are past.

Garrya elliptica.—As an evergreen for a wall, few shrubs can outvie this plant. Especially interesting just now are the male catkins with their pale green Hose-in-hose, as it were, individual flowers.

In some gardens it does very well as a shrub in the open, and when it can be grown in this way makes a very handsome specimen indeed. It is not exactly a showy plant, but is particularly pleasing owing to its graceful appearance.

Elstree.

EDWIN BECKETT.

HARDY AZALEAS FOR SPRING EFFECT.

Of the various floral sights in a garden, a bed of the Ghent or American Azaleas is hard to beat, yet such sights are comparatively rare. The accompanying illustration shows a bed of these plants growing in a Highgate garden. These were planted eight years ago this February. Except once—two years ago last flowering-time—they have been a perfect picture each year. Their richly-coloured flowers easily demand attention, especially when seen in large masses.

These delightful plants are not difficult to manage if, at the outset, suitable conditions are provided for them. Where there is a fair depth of fibrous or loamy soil present—say, 18 inches to 2 feet—the preparation will not be heavy work, as it will only be necessary to add some coarse sand. Some growers advise peat or leaf-mould, but this is quite unnecessary if the soil is as described

The larger spaces between the Azaleas can, for the first two or three years, be filled with summer-flowering plants, such as Lilliums, Montbretias or Canterbury Bells.

Ken Vicw Gardens, Highgate, N. C. TURNER.

THE ROCK AND WATER GARDEN.

HOW TO MAKE A MORAINÉ GARDEN.

RECENTLY considerable attention has been given to that adjunct of the rock garden, the moraine; and where it is possible to devote the space (if only a square yard or two) in some fully-exposed position it would, I think, be well to proceed without delay to make the necessary alteration. The three main

not only supplies copious volumes of ice-cold water to the little plants, but carries away all the finer parts of the broken stone and so greatly adds to the rapidity of drainage. When the falling temperature causes growth to cease, the water supply is automatically cut off by the freezing up of the glacier, usually accompanied by heavy falls of dry snow, which effectually protect the plants from any sudden change of temperature, should it occur, while the considerable time it takes for this snow blanket to melt through and expose the plants in the following spring ensures that they come forth into a year so far advanced that the likelihood of a check is improbable. Often June is well advanced before these high mountaineers see the sunlight after their long winter sleep. With some care and thought we can do a great deal to minimise the widely different conditions which prevail in our gardens from those existing in the Alpine regions. When one's garden is situated upon a comparatively



A BED OF HARDY AZALEAS, WITH A BACKGROUND OF TREES, IN A HIGHGATE GARDEN.

above. Where, however, the soil of the chosen site is heavy and sticky, it must be trenched 2 feet deep and a liberal amount of leaf-mould and common fibrous peat added, also a greater portion of sand.

Planting may be done from October onwards until spring. The bed, an oval one, was 26 feet long and 13 feet wide at the centre. This year the bed is being enlarged and the bushes replanted at greater distances apart. In very dry seasons see that the plants do not lack water when making growth, and if a mulching of cow-manure be given during August or early September they will be greatly benefited.

factors to bear in mind in this connection are (1) ample provision for the sharpest possible drainage; (2) a copious supply of water during the growing season; (3) some provision to ensure the utmost dryness of the crowns of the plants during the winter, coupled with comparative dryness of the moraine soil during that time.

It is easy to understand how our little mountain friends obtain these conditions in their alpine homes. The heaps of stone detritus which accumulate at the foot of a glacier, often piled up at an acute angle, ensure ample drainage, while the continuous melting of the ice and snow on the slopes above during the warm or growing season

retentive soil—and I suppose but few of us are favoured with a coarse gravel or rock subsoil—the best way to proceed in making a moraine is, from my own experience, as follows:

Position for the Moraine.—Having decided upon the position, which must be an open one, and preferably where the rock garden slopes gently up, dig into this mound so as to form a trough about two feet deep, and with the bottom falling gently to one point, say, in the front. Either brick up the sides of this compartment or build up with stone or concrete, so as to make this "dish" watertight to at least 8 inches from the bottom. At the lowest point of the bottom an

outlet should be arranged which can be easily opened or closed from the outside. It will be readily seen that if this bottom valve is closed and water allowed to enter the compartment, it will rise to the depth of 6 inches in the front (and something less at the back, owing to the slope of the bottom), while if the valve is opened, no water whatever will remain in it. Care should be taken to carefully guard the inner side of the valve, say, with perforated zinc, or, better still, perforated brass. The next thing to do is to put in about five inches or six inches of broken stone or brick of about the size of an Orange, and on this a layer, 2 inches thick, of stones, just large enough to roughly cover over the interspaces between the lower "rough stuff," and so prevent finer soil from choking up the drainage.

The Best Soil.—Upon this intermediate layer the moraine soil proper should be laid, of sufficient thickness to entirely fill the moraine, and should consist preferably of sandstone chips put through a half-inch or three-quarter-inch mesh sieve for the lower part and a quarter-inch mesh sieve for the upper. If there are fine particles in this, as there probably will be, it is advisable to put the whole through an eighth of an inch mesh sieve to get rid of the dust, which so readily clogs the drainage. Just a suspicion of well-decayed leaf-soil may be added to the top 6 inches, say, one part to fifteen of stone chips. If the boundary walls of the moraine have been arranged in an irregular outline and have been topped with decorative pieces of stone, the whole should resemble any other part of the rock garden, except that the contents of it are more stony than the rest. Similar pieces of stone can also be inserted just into the surface of the moraine to break the otherwise flat expanse, and among these the plants will nestle.

The Water Supply.—If water is now allowed to enter the moraine from some diverted trickle which may already decorate the rock garden, or, if not, is supplied by hand every day or so, fresh water will be more or less constantly passing beneath the roots of the plants contained therein and overflowing at the 6-inch level, and during the growing season this should be the condition of things. When the autumn is with us, the water supply may be cut off, and about the end of October or early November, dependent upon the kind of weather at the moment, the lower valve should be opened and left so until spring returns. It is a good plan, where possible, to let the overflow from the moraine trickle down to supply our bog-bed, and thence away or into any little pool we may have. To protect the crowns of the plants from overhead wet, or the dirt brought down by fogs, a very simple contrivance of three pieces of bent wire so placed as to support a sheet of glass some 4 inches or 5 inches above each clump serves admirably, and, if occasionally cleaned, admits both light and air and so does not "coddle" the plants at all. The glass should be slightly tilted to allow the rain to drip off clear of the plant itself. A very fair substitute for broken sandstone is broken brick, but any old mortar adhering thereto should be taken off if it is proposed to grow lime-hating plants.

The Best Plants for a Moraine.—Upon a moraine so constructed such plants as the following will thrive to a much greater extent than they usually do in the rock garden proper: *Æthionema coridifolium*, *Androsace Lageri*, *Anemone vernalis*, *A. narcissiflora*, *Arenaria balearica*, *Campanula Allionii*, *C. alpina*, *C. cenisia*, *C. morettiana*, *C. pulla*, *C. Zoysii*, *C. excisa*, *Dianthus glacialis*, *D. alpinus*, *Draba pyrenaica*, *D. aizoides* and varieties, *Geum reptans*, *Gypsophila cerastioides*, *Houstonia cærulea*, *Linaria alpina*, *Lychnis alpina*, *Papaver alpinum*, *Primula integrifolia*, *P. glutinosa*, *P. viscosa*, *P. minima*, *Ranunculus glacialis*, *R. alpestris*, *R. parnassifolius*, *Saxifraga aizoides*, *S. Aizoon*, *S. oppositifolia*, *Douglasia vitaliana*, *Wahlenbergia divarica*, *Silene acaulis* and varieties, *Thlaspi rotundifolium*, *Viola biflora* and *V. cornuta*.

REGINALD A. MALBY.

THE MEADOW SAFFRONS OF SPRING.

We are most familiar with the Meadow Saffrons of autumn, which make such handsome ornaments for the decoration of the garden at a season when other dwarf bulbous plants are practically absent from them, and when we enjoy all the more their cups of purple or white. It is only within recent years that the few spring

A spring-flowering Meadow Saffron which occupies a practically unique position in respect to its possession of yellow flowers is that called *Colchicum luteum*. This species, which is said to be a native of Afghanistan, Baluchistan and other Himalayan quarters, is not proving so satisfactory as we would like, and we may probably have to wait for the introduction of a stock from its coldest habitats to find it really satisfactory in this country, although some have succeeded with it. It sometimes flowers in midwinter, but is usually considerably later. Its flowers are of a nice shade of yellow, but as regards effect it is far behind the yellow *Crocus* of spring.

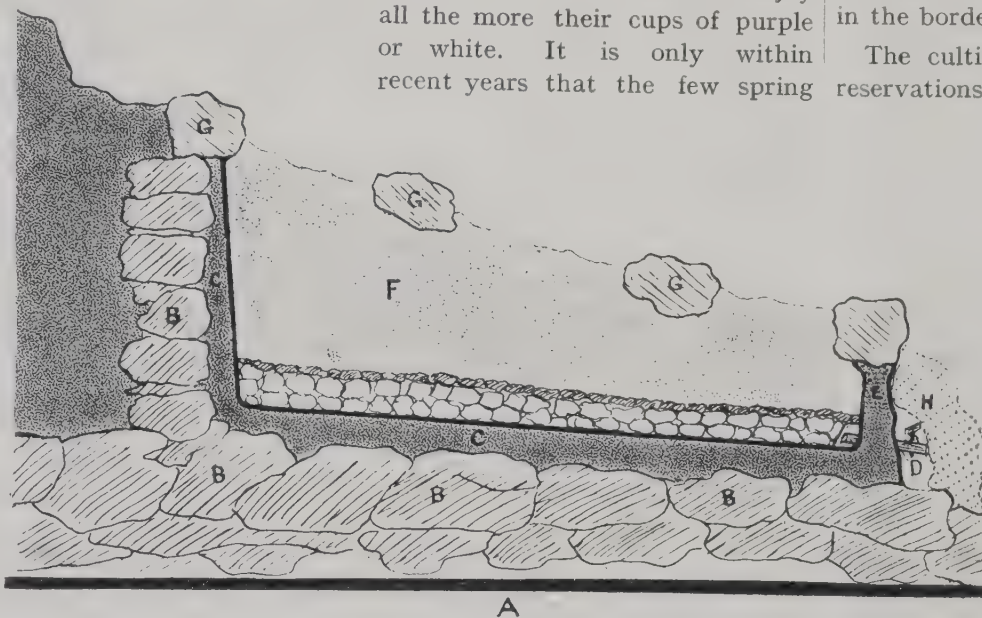
One of our latest additions to the spring garden of bulbs is *Colchicum hydrophilum*, which likes a moist place and is generally a satisfactory plant in the garden. The writer has not found that it increases freely, but it is a pleasing Meadow Saffron with sweetly-scented flowers in winter and spring. They are of a kind of reddish pink. Under the name of *C. libanoticum* we have what appears to be a variety of *Colchicum montanum*, a variable species, flowering in spring also. It is a neat little plant with flowers of a kind of purple rose and white, and thrives well on the rockery or in the border.

The cultivation of these *Colchicums*, with the reservations already mentioned respecting the fondness of the slug for one and a preference for moisture with another species, is easy in ordinary soil, although they generally prefer one of a heavy kind. Most, or all, are suitable for bays in the rock garden.

Corms are secured in autumn and planted with the crown about 2 inches beneath the surface. Some dealers may be able to supply them in pots at this season.

Dumfries.

S. ARNOTT.



SECTION SHOWING CONSTRUCTION OF A SMALL MORAINÉ GARDEN.

A, horizontal line; B, hard-core foundation; C, cement concrete, draining towards outlet; D, winter outlet with perforated zinc cover; E, 8-inch overflow; F, moraine soil, upon small then large rubble for drainage; G, decorative stones; H, stone hiding tap of winter outlet.

THE DOUBLE YELLOW SNOWDROP.

Now that Snowdrop-time is with us, the beauty of the double "yellow" Snowdrop is apparent in the few gardens where it is

to be met with. It is very scarce—rare, indeed—although a plant was found growing in a Cheshire garden some years ago. It has been kept pretty closely in a few hands, and is one of the most pleasing of the double varieties of the common Snowdrop. It must be clearly understood that the flowers are mainly white, and that the term "yellow," as applied to Snowdrops at present, means that the usual green markings are metamorphosed into yellow.

In the double one these yellow markings look extremely pretty when we examine the flowers. The stems, spathes, seed-capsules and other parts, generally yellow in the single "yellow" varieties, are green in this one, and the golden coloration is confined to the interior markings. It is, however, a lovely Snowdrop, and it is only those who know it who can realise the beauty of the combination of purest white and yellow which characterises the flower, which, when it becomes better known, will be a great favourite with many.

A. M. D.

species which are available at the present time have attracted a little notice from the lover of bulbs, and they are not yet generally known. They are pretty and useful flowers, though their value is lessened by the fact that at this season we have a number of charming *Crocuses* at the command of those who like flowers of this class.

Yet those who welcome a variety might do worse than introduce a few of these spring *Colchicums* or Meadow Saffrons to their gardens. They have beauty of their own, and they give the change which is so acceptable to many cultivators of flowers. One of the Spring Meadow Saffrons which has been for some time in cultivation is *Colchicum crociflorum*, a dainty little plant having pretty small flowers of white, striped outside with deep purple, and sharp-pointed foliage. It is a dwarf plant, flowering in earliest spring, in fact, often before January passes away, although this depends much on the season and the position. Its chief enemy is the slug, which will frequently destroy the flowers and eat the foliage, thus weakening the corm or bulb for another season. It is, however, a dainty little flower.

GARDENING FOR BEGINNERS.

HOW TO GROW ORCHIDS UPON RAFTS.

THE majority of Orchids thrive best when cultivated in ordinary flower-pots or pans, but there are quite a number that only succeed if grown upon what is usually termed a raft.

They embrace all those species possessing a climbing habit, such as *Oncidium flexuosum*, *Angræcums infundibulare*, *eichlerianum*, *imbricatum*, *Aerides Vandarum* and *Broughtonia sanguinea*, while others will occur to the mind of the observant cultivator.

The raft is made of Cork or some other durable material, such as a piece of Apple wood, which should be split down the centre, removing all side shoots, and it ought to be 1 foot or so in length (slightly longer than the plant, to allow for further development) and from 3 inches to 4 inches wide. A layer of compost is then placed on the flat side and made secure with fine copper wire, when it is ready for the plant, as illustrated in Fig. 1. The soil consists of *Osmunda* fibre, peat and sphagnum moss in equal parts, and after it is wired to the raft all loose particles may be clipped off with a pair of sharp scissors or shears.

Having chosen a specimen that requires attention, it is carefully removed, picking out the

decayed soil with a pointed stick, and cutting away all dead roots and the leafless part of the stem. It is then placed on the new compost, but must be made quite firm with a piece of raffia at occasional intervals, when roots will soon penetrate the soil and become attached to the raft. There are two ways of growing Orchids when arranged on a raft—they may either have a wire fastened to the top and be suspended from the roof, or the base of the raft and plant may be put in a flower-pot, as shown in Fig. 2, being made secure there with potsherds and the usual rooting medium, while it is advisable for the top of the raft to lean over at a slight angle. This is a very good method, because all plants grown on rafts, especially if suspended, are apt to get extremely dry during the summer months; but by adopting the course described and illustrated on this page the danger of becoming excessively dry is considerably reduced. It will be found that more water will be necessary than for plants growing in the ordinary way; but if lightly sprayed overhead occasionally and the top part of the raft dipped whenever it becomes dry, the Orchid will thrive and produce its flowers in due season.

S.

HOW TO TREAT BULBS IN FRAMES.

At the present time there are many thousands of pots of bulbs, chiefly of Hyacinths, Tulips and Narcissi, being removed from their coverings of ashes, soil or sand and placed in frames. Not all, of course, are grown for exhibition; but I will give a few hints on the treatment of bulbs intended for exhibiting, and such hints may be applied to those for greenhouse or conservatory decoration also. I have put my bulbs in frames, and always place empty inverted pots over them prior to covering all with ashes or soil. All cultivators do not so treat them, but bury the potted bulbs with soil or ashes solely. In any case, it is advisable to place empty inverted pots on the bulbs directly they are taken to the frames, and, in addition, to cover the lights with mats. When empty pots are put over Hyacinths, no loose covering material can reach and cause the growing spikes any injury. Both the leaves and the growing spike are kept quite clean, a very important point in the management.

Of course, the leaves, as well as the spikes of bloom, are quite white when taken from the ashes, and sudden and full exposure to the light would be bad for them. The exposure must be very gradual. All growth will not be equally advanced when the bulbs are put in the frame, and I advise the inexperienced to cover backward Tulips with clean sand 1 inch deep, this in addition to the inverted pot. At the end of a week or ten days remove the crock placed over the hole of the empty pot. When another week has passed, take off the empty pot entirely, but still retain the mats on the glass. At this stage ventilate the frame a little night and day, except in frosty weather. When the Tulips have grown through the sand, carefully shake off the latter. At this stage the bulbs will be making headway nicely, and the mats must be removed before the leaves and flower-stems are unduly drawn up; but it is chiefly



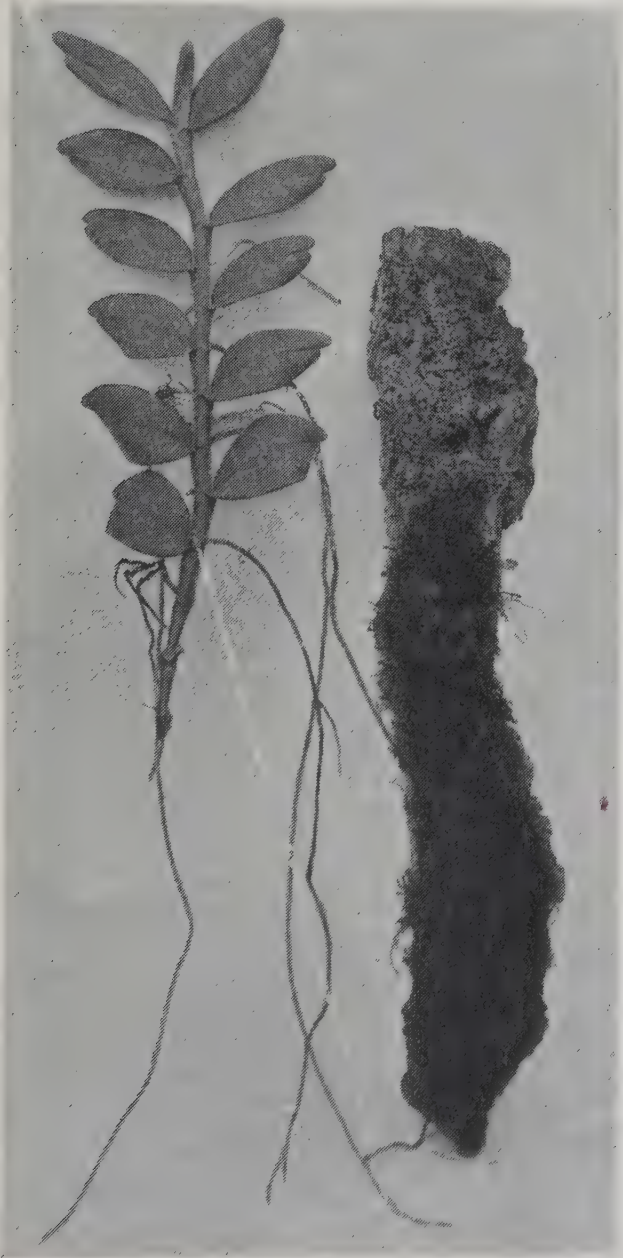
THE SAME PLANT FIXED TO THE RAFT AND PLACED IN A POT. THE SCISSORS AND POINTED STICK ARE USED IN THE WORK.

owing to premature exposure to light and air that Tulips and Hyacinths are often to be seen with short, stumpy leaves and squat spikes of bloom. They must be drawn up somewhat, and then the feeding should commence if there are plenty of roots. Weak manure and soot water, respectively, should be used alternately for a time, and then only the former, and the best way to apply both is to half fill saucers and stand the bulb pots in them for a whole night at a time once every fortnight. Never allow the roots to get very dry, and extra fine flowers will result.

SHAMROCK.

HINTS ON ORDERING SEEDS.

BEGINNERS and amateurs generally would save seedsmen a great deal of anxiety and work, as well as ensuring prompt despatch of their seeds, if they would always make a point of using the printed order form issued with most seed catalogues. This is usually numbered or arranged alphabetically, and its use greatly facilitates the putting up of orders. Some trouble should also be taken to write the name and address to which the seeds are to be sent as plainly as possible.



PORTION OF EPIDENDRUM SUITABLE FOR FIXING TO THE RAFT SHOWN ON THE RIGHT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Lawns.—Unless the ground is in a very wet state, give these a good brushing and rolling weekly. These, in my opinion, are the best means of ridding the surface of worm-casts, as well as being invigorating.

Walks and Drives.—Any re-surfacing that may be required in this direction should be done without delay. However large or small the garden, walks or drives should always be provided with suitable drains or catch-pits to take surface water. See that the latter are cleaned out periodically, and take advantage of showery weather for rolling.

The Shrubbery.—Any replanting that may be necessary should be done without delay, that is, with the exception of Hollies and evergreens, which are better transplanted in April. Break up the bottom of the holes, and have them sufficiently large so that the roots are not cramped. Coarse and damaged roots should be cut back in the same manner as for fruit trees. Lay the roots out evenly and make the soil firm as the work proceeds.

Pruning Shrubs.—The amount of pruning necessary and when best performed are governed principally by the habit and the manner of flowering of the particular subject in question. Generally speaking, those that flower on newly-made young growth are best pruned in the spring when growth is just commencing, while those that flower on the current year's growth should be pruned immediately after flowering. Many shrubs merely require the dead growth to be removed and an occasional check when getting too large.

Herbaceous Borders.—Strong-growing subjects that are encroaching too much are best split up, and this is best done by inserting two forks back to back and opening out the handles. This is far preferable to chopping with a spade. Always select the most vigorous pieces of growth, which are usually found on the outer side of the clump.

Violets in Frames.—To maintain the plants in a healthy condition, these must receive plenty of light and air. Except when frosty, always allow a free circulation of air, and on mild days remove the lights entirely. Water the plants if necessary, pick off yellow and other decayed leaves, and aerate the soil. Protect well at night when the weather is cold.

Aquilegias.—These, especially the long-spurred varieties, make excellent pot plants for the greenhouse if potted now and placed in a cold frame for a few weeks; afterwards grow in a little warmth.

Kitchen Garden.—The work in this department will continue to increase daily. The earliest Green Peas are undoubtedly best raised in small pots, where they are safe, or nearly so, from the ravages of birds, mice and slugs. Sow the seeds thinly in fine soil, give a watering in, and stand on an ash bottom in a cold frame. Give plenty of air whenever the weather permits. Boxes may also be utilised if preferred to pots. Place the seeds 2 inches apart each way.

Potatoes.—The earliest supplies in frames may now be started, and before planting place the seed Potatoes on shallow boxes or trays in a light position, free from frost, to sprout. Plant in a light, open soil, just covering the tubers. Well cover the frames at night, and as soon as growth appears draw a little soil around the plants.

Carrots.—Young Carrots are a great delicacy, and may be obtained quite easily where a frame upon a mild hotbed can be secured. An excellent plan is to sow the Carrots in drills 6 inches apart, and then, broadcast, a thin sowing of Radishes. The latter germinate quickly, and are cleared before the Carrots attain any size. Select a variety of Carrot of the Stump-rooted type.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Muscat Vines.—The vinery to produce ripe fruit in early autumn must now be kept shut, in order to have the buds ready to break by the beginning of March. If infested last year with any of the noxious insects which appreciate living on the Vine, the rods should be again washed with very hot soapy water and afterwards painted with a mixture of tar, one part, and clay, nine parts.

Mushrooms.—One has to be very careful in applying fire-heat, which has a drying influence altogether detrimental to the production of fine Mushrooms. When it is possible to introduce fresh heating manure at short intervals, enough heat of a moist kind is produced to keep the beds in bearing without the need of almost daily surface sprinklings of water.

East Lothian Stocks.—Sow seeds now, and as compost employ some quite simple material, such as sifted loam, crushed mortar and sand, the seedlings, like those of most crucifers, being addicted to stem-rot. The rose, mauve, purple and white varieties, when true, are well worth any care necessary to grow them well.

Antirrhinums.—These also should be sown at once, the tall varieties in particular requiring a lengthened season of growth to give the best results. For these I half fill ordinary cutting-boxes with a light compost, which is soaked with water a few hours before the seeds are sown. These are barely covered with very fine soil, and germinate freely in a temperature of 60°. If more water is required before being pricked out, dip the boxes in a tank of water rather than moisten overhead.

Hollyhocks.—Strong plants may be planted out as soon as or when the ground is in good condition. They are quite hardy, but may be protected for a week or two by means of a flower-pot inverted over each plant. Late-raised plants must, of course, be left till later. They will progress very well in a cold pit meanwhile.

Auriculas.—Now that vegetation is again on the move, all withered leaves should be removed from these, the dirty and sometimes mossy surface soil cleared off, and, if the soil is very dry, some tepid water applied. It requires less of this than of cold water to moisten the soil, which is an advantage. Some nice smooth compost should be applied to the surface after the soil has become slightly dry.

Cinerarias.—These are now coming freely into flower, and should be arranged in the show-house where they can be cool, especially at the bottom, but free from draughts. Often apply manure-water, and, if leaf-borers appear, crush them between the finger and thumb. Aphides must be sternly kept at bay.

Arum Lilies.—These, too, are blooming profusely, and must have abundant supplies of manure-water at the roots. The flowers are all the whiter if not grown too coolly; but much heat lessens their size and also brings hordes of green fly, which must be kept down by repeated nicotine vaporisings. *Richardia elliotiana* will start well now in a strong heat. *R. Rossii* is much easier to grow.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Border Carnations.—The Carnation is a favourite in nearly every garden, but in some it is a difficult plant to grow, and especially in town gardens. This fact being realised by cultivators, they use old plants of Tree Carnations for the furnishing of various flower-beds during the summer months. Flowers on them are produced over a longer period than on the border varieties. There is one belonging to the latter, however, that generally lives for many years and flowers profusely. I refer to Raby Castle. Its flowers are beautifully fimbriated, pink in colour and of much substance. The present is a good time for the trenching and manuring of the soil in readiness for planting at the end of March.

Polyanthuses and Primroses.—These plants are now recovering from the effects of excessive moisture and coldness of soil during the earlier days of winter, and in order that the flower-stems may come stronger than usual, the cultivator should very carefully remove all decaying basal leaves, lightly loosen the surface soil, and put on a rich top-dressing of rotted manure and good loam mixed. The compost need only be laid on to a depth of a little more than an inch; the new roots will soon enter it. If the soil be light, press it down firmly with the hands while it is in a fairly dry condition.

Roses to Plant.—The autumn is really the best time for Rose tree planting, but it is not always convenient for owners of gardens to do the work at that time. The soil is very cold in January, and the early part of February will be a better time. Trench the soil 30 inches deep, well breaking up the subsoil. The manure used should be put on the surface and not allowed to come in contact with the roots. Hybrid Perpetuals.—Captain Hayward, Mrs. John Laing, Mrs. G. Sharman Crawford, Ulrich Brunner, Ben Cant and Dupuy Jamain. Hybrid Teas.—Lady Ashtown, Bessie Brown, Caroline Testout, Marquise Litta, Killarney and Captain Christy. Teas and Noisettes.—G. Nabonnand, Mme. Bravy, Mme. Lambard, Marie van Houtte, Souvenir d'un Ami and General Schablikine. For Pillars and Arches.—Dundee Rambler, Crimson Rambler, Carmine Pillar, Gloire de Dijon and William Allen Richardson. For Late or Autumn Flowering.—Alister Stella Gray, Mme. Abel Chatenay, Queen Mab, Gustave Regis, Clara Watson and Camoens.

Seedlings in Boxes and Beds.—The seedlings of herbaceous and other plants raised from seeds sown last summer and the early part of autumn must be protected from severe frosts by coverings of mats or clean litter resting on wooden hoops driven into the soil or on cross sticks resting on forked pegs. The roots of such seedlings are, of course, very near the surface, and consequently are quickly frozen. The covering material must be removed directly finer weather comes.

The Garden Frame.—Violet plants growing in the cool frame will soon be in full flower, and, to prevent loss from damp, open the frame every day, except when it rains, is foggy or frosty. Stir the surface of the soil with the aid of a pointed stick or common label and pick off yellow leaves. Bedding Calceolarias also require plenty of light and air. Roots will form rapidly from this date.

The Greenhouse.—Lovers of greenhouse plants must keep the glass clean, train roof climbers, removing dead wood and worthless shoots. Keep the paths dry and begin to collect ingredients for potting composts. TOWN GARDENER.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

TREES AND SHRUBS.

CÆSALPINIA JAPONICA NOT FLOWERING (Alford).—We are afraid that you can do little to induce your *Cæsalpinia japonica* to flower. You might try, however, starvation treatment, as you say that it grows luxuriantly. Perhaps it is too well fed and all the energy goes to make rank growth. Root-pruning might assist in checking growth; it would, at any rate, be worth while to find a few of the principal roots and shorten them somewhat. If you have been in the habit of feeding the plant, stop the extra food supply for a year or two.

CATALPA BIGNONIODES (A. W. W.).—The Indian Bean Tree, *Catalpa bignoniodes*, may be planted at any time from the present up to the middle of March. Make a circular hole 1½ feet deep, digging or loosening the soil in the bottom of the hole. If very heavy, mix a little sand with the soil. Fill in to within 9 inches of the surface and allow the soil to settle for a few days; then plant the tree, taking care to keep the upper roots near the surface of the soil. Tread in well, and, after the ground has settled somewhat, turf the outer part, leaving a circle 3 feet in diameter around the trunk of the tree. A mature tree may be anything from 20 feet to 40 feet high, with a spread of branches of 25 feet to 45 feet. The diameter of the trunk may be from 12 inches to 15 inches.

THE GREENHOUSE.

OXALIS (M. M. N. D.).—The leaves sent are those of *Oxalis Ortgiesii*. You say nothing as to the conditions under which the plants have been grown; but we would point out that this species requires more heat than most of the others for its successful culture. It is a native of the Andes of Peru, and succeeds best in the temperature of an intermediate house. The discoloration of the leaves is certainly due to some error in culture, either from lowness of temperature (which we suspect) or from some deleterious matter at the roots.

ABOUT FERNS (Mrs. E. P. S.).—The Ferns sent are: 1, *Nephrolepis exaltata* Amerpohlii; 2, *Pteris tremula*; 3, *Nephrolepis cordata compacta*. They are all three amenable to the same treatment; that is to say, the most suitable temperature for them is that of a warm greenhouse, where a temperature of 50° to 65° is maintained during the winter. As a potting compost, providing the leaf-mould is good, it is the equal of peat. Such a mixture as that detailed by you is very suitable for Ferns in general. No. 1 is of a rather delicate constitution, and is apt to damp off unless the atmosphere of the structure is light and buoyant, while No. 2 is of a vigorous nature, and needs more liberal treatment than the others. As you do not wish them to be in larger pots, you may feed them with one of the concentrated manures, of which there are now so many on the market. Be sure to follow the instructions given, as many of them are very powerful. They are all much cleaner to use than liquid manure. To stimulate the Maidenhair in a porous vase dissolve a little manure in

water and immerse the vase therein. The best time for the general potting of Ferns is in the latter half of February and first half of March.

RUST ON CYPRIPEDIUM LEAVES (C. S. B.).—The leaves of your *Cypripedium* are attacked by a fungus disease commonly known as leaf rust. The cause is, no doubt, local, although it may have been introduced from another source, such as upon an imported plant. Keep a nice growing atmosphere, and your plants will probably become sufficiently strong to resist future attacks. At present each specimen affected may be dipped in a solution of liver of sulphur (sulphide of potassium), at the rate of 1oz. to two gallons of hot water. Allow it to cool, and, after the dipping process, the plants ought to be laid on their sides till the liquid has drained away.

SPAN-ROOFED GREENHOUSE (Confidence).—Provided you have roots available, you could readily force Rhubarb under the stage as suggested, and Seakale as well. You might also utilise the house for striking cuttings of Perpetual-flowering Carnations, though, of course, for growing them afterwards they need a light and airy structure. During the spring such a structure may be employed principally as a propagating-house, in which may be struck cuttings of the various subjects that bloom in autumn, winter and spring, such as Bouvardias, *Salvia splendens*, *Calceolaria Burbridgei*, *Linum trigynum*, *Poinsettias*, *Euphorbia fulgens*, *Begonias* of sorts, *Eupatoriums*, *Eranthemum pulchellum*, *Plumbago rosea*, *Justicias* and many other plants. These may be grown elsewhere in the summer, and in autumn, when the Cucumbers are cleared out, they may be again returned in order to develop their flowers. Such a structure, too, would be very useful in the early months of the year for the forcing of bulbs for house and conservatory decoration.

FRUIT GARDEN.

BLACK MARKS ON NECTARINE SHOOTS (A. J. A., Dorking).—The Nectarine shoots are attacked by the disease known as "die back," due to a fungus which grows in and kills the shoots. All shoots showing these dead parts should be pruned out and destroyed during the winter. See that the border is thoroughly well drained, and do not stimulate the trees to rapid growth.

SMALL FIGS (W. E. T.).—Do not remove the partly-formed fruits from your Fig tree. They will probably pass through the winter uninjured, and will commence to grow again when the days get warmer. Such fruits form the earliest crop of a Fig tree, a later crop being produced from buds on the new wood. We should advise you simply to leave the tree alone and let things take their course. Should severe weather occur and injure the young fruits, they will fall naturally, and, at any rate, they are not likely to do any harm to the tree by being left on.

GROS COLMAR GRAPES NOT COLOURING (Hal).—The appearance of the Grapes points to the fact that the Vines were overcropped, and also that the foliage must have suffered from red spider or some other weakening cause before the Grapes had been properly developed, coloured and ripened. Last summer was exceptionally hot and dry, and the Vines may have suffered also from inadequate ventilation and from dryness at the roots. The stalks of the berries had given way and were dead before their functions were completed, by reason, we think, of the above causes.

FRUIT TREES ON WALLS (D. F. F.).—Apples, Pears and Plums would succeed very well on your west wall, provided some turfy loam of a heavier and stiffer texture were mixed with your light soil, say, half a barrow-load to each tree, well mixing it with the natural soil. You could not depend on a good crop of either of the above fruits this autumn, but you could the following autumn. As regards your north wall, if you were to plant this with cordon trees of Gooseberries and Currants, you should have a fair supply of fruit this autumn. If you decide not to plant fruit trees against your west wall, Tomatoes would do well against it and be remunerative. Apples: James Grieve, King of the Pippins and Cox's Orange. Pears: Beurré Giffard, Williams' Bon Chrétien and Doyenné du Comice. Red Currants: Fay's Prolific, The Comet and Versailles. Gooseberries: Rumbullion (red), Langley Gage (white) and Keepsake (yellow).

ROSE GARDEN.

ROSES FOR CUTTING (J. G.).—Some of the varieties you name are very good to plant out for cutting purposes; for instance, Frau Karl Druschki is easily the best all-round white Rose, followed closely by Molly Sharman Crawford. Hugh Dickson is not free-flowering enough; otherwise the colour is superb. We think the new Rose Lieutenant Chauré would be a more serviceable variety from your point of view. A good crimson is the old General Jacqueminot, and you would do well to have some of this, also of Captain Hayward, Ulrich Brunner and General Macarthur. Then there are two fine reds in Liberty and Richmond. We are still looking for a good red that will meet our requirements of being a good all-round sort, both in colour and form, and also continuous flowering. Caroline Testout, though beautiful, is being displaced by Roses of the type of Mme. Abel Chatenay and Lady Ashtown, while another good sort is Mrs. Sharman Crawford. Dean Hole is not specially a good one to plant out for cutting. We would rather recommend you the Lyon Rose. Mme. Ravary would do, although its open flowers are not at all a florist's ideal, yet it yields beautiful buds. Lady Roberts would be a fine kind to plant for a yellow. We should not advise Mme. Jules Gravereaux; instead of this, plant Prince de Bulgarie or Pharisæe.

BUDDING SEEDLING BRIARS (Rosary).—Do not cut down the stocks. You may trim back the shoots to about one foot at the time of planting. The bud is inserted in the root just beneath the branches. Standards should be budded in the shoots that are produced this summer. If any old side shoots remain, cut all back close to the main upright stem. New shoots will break out at the proper time, and into these the buds may be inserted.

MISCELLANEOUS.

GLADIOLUS EUROPA (G. J. B.).—*Gladiolus Europa*, concerning which you enquire, is, as shown on August 16, 1910, when an award of merit was given it, a very fine, pure white flower of good form. In some cases as many as half-a-dozen flowers were open at the same time. Our opinion is not founded on a spike or two, as it was then shown in considerable numbers. We, however, have had no practical experience of it; but everything pointed to it being of good constitution.

BOOKS ON LILIES (New Zealand).—"Lilies for English Gardens," by Gertrude Jekyll, obtainable from this office, 8s. 6d.; "The Book of the Lily," by W. Goldring, 2s. 6d., from John Lane, The Bodley Head, Vigo Street, London; "Lilies," by A. Grove, 1s. 6d., from The Publisher, 41, Wellington Street, Covent Garden, London, W.C.; and "Notes on Lilies," 2s. 6d., from Messrs. Wallace and Co., Kilnfield Gardens, Colchester. These are all of a useful nature, the first-named being, perhaps, the most valuable. The postage would be extra in each case.

GREEN GROWTH ON ROSE SHOOTS (W. B.).—The green growth on the Rose shoots is not a fungus, but an alga capable of making its own food, and in no way a parasite. It may be found growing almost anywhere where the conditions of light and moisture are suitable. It is probable that some other cause is responsible for the death of the Roses. The green growth may easily be got rid of by spraying the Roses with a weak caustic wash, say, three-quarters of a pound to one pound of caustic soda to ten gallons of water; but the spraying must be done while the trees are dormant.

FEATHERED HYACINTHS (A. M.).—We do not quite understand your failing so completely with these easily-grown bulbous plants, and, assuming that you started with good bulbs and that their non-appearing has been general, we can only assume that your soil is wrong, teeming with slugs, millipedes and the like, which do irretrievable mischief to such things. Usually in light soils these plants are of the simplest culture, though often enough in cold and retentive soils they are bored to death, rendered so full of holes, and every vestige of leaf and root fibre so eaten away that any evidence of life above ground is impossible.

EXHIBITING SWEET PEAS (Puzzled).—We are afraid that you will have to exhibit in the classes open to all. We take it that you are a skilled professional gardener, and it would not, therefore, be quite fair for you to compete in the classes reserved for amateurs having no special knowledge or experience. As far as the National Sweet Pea Society is concerned, you would have to stage your own blooms or arrange with an accommodating friend to do it for you. At some provincial exhibitions the committee undertake the staging of produce when it is impossible for the owner personally to attend. The varieties you have are all excellent, and, grown to perfection, should carry you to success in strong competition.

NAMES OF PLANTS.—Mary Jane.—The specimens sent are ordinary Watercress. —Russel.—1, *Sempervivum Haworthii*; 2, *Mesembryanthemum polyanthum*; 3, *M. echinatum*; 4, *M. edule*; 5, *Othonna carnosa*; 6, *Mesembryanthemum muricatum*; 7, *Ophiopogon japonicus*; 8, *Helxine Solierolii*; 9, *Selaginella Braunii*; 10, *Moschosma riparium*. —D. E. W. G.—*Billbergia nutans*.

THE EDITOR'S TABLE.

Flowers of the Loquat Tree from Torquay.—Mr. E. G. Haywood has kindly sent for our inspection from the Villa Borghese, Torquay, a flowering branch of this handsome Chinese and Japanese tree, *Eriobotrya japonica*. The plant from which it was cut grows in the open ground 250 feet above sea-level, and, judging from the specimen, it must be in a very healthy state. Although the Loquat frequently blossoms out of doors in a few parts of the South-West Counties and in South Wales, it appears to be flowering more freely than usual this winter, and instances of flowers being borne on plants growing against walls in the neighbourhood of London have been recorded. A plant growing against a south wall at Kew is at present bearing a dozen or more heads of flowers. Probably on account of the natural flowering-time being mid-winter, fruits are seldom, if ever, matured out of doors in this country, although they come to perfection in the South of France. These fruits are golden in colour, 1 inch to 1½ inches in diameter,

and borne in good-sized clusters. They have a marketable value, both on the Continent and in China and Japan, for they are Apple-like in character and are used for dessert. The most striking thing about the flowers is their powerful Hawthorn-like fragrance.

A CHARMING ALPINE DAISY.

(*BELLIS ROTUNDIFOLIA CÆRULESCENS*.)

BURDENED with an atrociously long name is this charming little blue Alpine Daisy. It is a fairy-like plant indeed, and one which charms the devotee of the beautiful among the flowers of the rock garden. It is a truly dainty flower, giving above its pretty rounded leaves little stalks bearing small flowers of white, exquisitely tinged with blue. It grows only 1 inch or 2 inches high, and a small group of this Alpine Daisy is exquisite on a flat spot a little above the ground-level and in the rock garden. Unfortunately, this pretty flower is not absolutely hardy. Some of our inclement winters prove fatal to it, and we will, therefore, be wise if we keep a spare plant or two under glass to be ready to replace those outdoors if lost. Fortunately, however, seeds can be procured, and this Daisy can also be increased by division; consequently we need not long be without its presence in the garden. It comes from Morocco, so that little surprise may be felt at its tenderness in this variable and cold climate of ours. In some winters it is hardly affected by the severity of the frosts, but in others it is certain to succumb. Would that some raiser would secure us a hardier race of this exquisite little Alpine Daisy. Seeds should be sown as early as possible from now in pots of sandy soil, and the young plants, after being pricked out and hardened off, planted on sandy soil in a sunny place on the rockery.

Dumfries.

S. ARNOTT.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THE usual fortnightly meeting and exhibition of this society was held at Vincent Square, Westminster, on Tuesday, January 23. Greenhouse flowers, especially Carnations and Cyclamen, were extremely bright and attractive, lending very pleasing tones in colour on a day which turned out exceptionally dull and gloomy. Collections of Apples remarkable for their very high colour were also a special feature of this exhibition.

FRUIT AND VEGETABLE COMMITTEE.

Present: Mr. Joseph Cheal (chairman), and Messrs. A. Dean, J. Willard, J. Vert, A. R. Allan, J. Davis, P. D. Tuckett, J. Harrison, H. S. Rivers and C. G. A. Nix.

From Messrs. George Bunyard and Co., Maidstone, came a first-rate collection of Apples that at once caught the eye of visitors on entering the hall. This wonderful collection comprised no fewer than 180 varieties of exceptional quality and remarkable for their colour. A few dishes of Pears were also shown, including a dish of colossal fruits of Uvedale's St. Germain. Gold medal.

Messrs. W. Seabrook and Sons, Chelmsford, put up a capital collection of dessert and cooking Apples staged in baskets. About forty varieties were shown, including Bismarck, The Queen, Newton Wonder and Bramley's Seedling. Silver Knightian medal.

Messrs. Sutton and Sons staged a remarkably fine collection of Onions, Potatoes and Beetroots. Onions were the chief feature of this collection, and comprised Selected Ailsa Craig, A.I., Reading and Bedford Champion. It is seldom that such fine and firm bulbs are seen in January. Carrot New Red Intermediate and Favourite, and Parsnip Tender and True were wonderfully good for the time of year. Silver Knightian medal.

Mr. W. E. Sands, Hillsborough, County Down, Ireland, showed a very nice lot of Irish-grown seed Potatoes, including a representative collection of the best varieties. Silver Banksian medal.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), Sir Jeremiah Colman, Bart., and Messrs. J. O'Brien, H. J. Veitch, Gurney Wilson, F. J. Hanbury, G. F. Moore, T. Armstrong, A. McBean, W. Cobb, J. Charlesworth, J. Cypher, W. P. Bound, J. E. Shill, H. G. Alexander, A. Dye, W. H. White, J. W. Potter, W. Bolton, J. S. Moss and de B. Crawshaw. Messrs. Sander and Sons, St. Albans, showed a good collection of Orchids in season, comprising Cypripediums in variety, Oncidium, Odontoglossums and a lovely

plant of the primrose-coloured *Lælio-Cattleya Phryne* primulinum.

Many interesting species were included in Messrs. Stuart Low and Co.'s collection, notably *Angraecum eburneum*, *Saccolabium bellinum* and various *Masdevallias*. Some very showy *Cattleya* hybrids and *Calanthes* were also shown.

Messrs. Armstrong and Brown, Tunbridge Wells, showed numerous bright and fresh-looking plants of *Cattleyas*, *Odontoglossums* and *Cypripediums*. The group was edged with plants of the low-growing *Masdevallia schroderiana* and *M. tovarensis* (white).

Sir Jeremiah Colman, Bart., Gatton Park, Reigate, sent a beautiful group of *Lælia anceps*, including such white gems as *L. a. Gatton Park variety*, *L. a. schroderiana* and *L. a. Williamsii*.

Messrs. J. Cypher and Sons, Cheltenham, again showed a remarkably fine collection of *Cypripediums*, which came in for general admiration.

Messrs. J. and A. McBean, Cooksbridge, Sussex, put up some choice *Odontoglossums* and *Lælia anceps*, also the lovely *Brasso-Cattleya Leemaniae*.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman), and Messrs. W. J. James, W. P. Thomson, G. Reuthe, John Dickson, C. Dixon, W. J. Bean, R. C. Notcutt, J. Green, C. T. Drury, E. A. Bowles, C. R. Fielder, J. F. McLeod, J. Jennings, W. Howe, H. J. Cutbush, A. Turner, E. H. Jenkins, C. E. Pearson, G. Paul, R. Hooper Pearson, C. E. Shea and J. T. Bennett-Poe.

Messrs. Barr and Sons, Covent Garden, had a most interesting exhibit of hardy plants, Snowdrops and the earliest Daffodils being prominently displayed. Note must also be made of a large colony of the white Hoop-Petticoat Daffodil, of *Iris Tauri*, *I. stylosa*, *Crocus Sieberi*, *C. Imperatii* and others. Hybrid *Gerberas* were also pleasing, and there were good groups of *Primula obconica* and *Narcissus Soleil d'Or*. *Lachenalia pendula* and *Lenten Roses* were also shown.

Messrs. W. Wells and Co., Limited, Merstham, had a pretty group of Carnations, among which we noted Wodenethe (a very fine white), White Wonder, R. F. Felton and others.

Mr. Bertie E. Bell, Castel Nursery, Guernsey, showed a fine group of the new Carnations Coronation, in really splendid condition. The rose pink shade is most effective, and particularly so under artificial light. A very fine Carnation in every way.

Mr. E. Guile, Shortgrove, Newport, Essex, sent a lovely vase of Carnations Lady Meyer, a greatly-improved Enchantress.

Messrs. James Carter and Co., Raynes Park, had a pretty exhibit of *Primula sinensis* in variety, the most remarkable form being one named Oakleaf, said to be a seedling sport from a double salmon variety, and which, happily, reproduces itself true from seeds. It is a most interesting departure in *Primula sinensis*. Many other good *Primulas* were shown.

Messrs. James Veitch and Sons, Limited, Chelsea, filled a table with greenhouse flowering plants of a useful and attractive character. Of these we noted *Primula kewensis*, *Begonia Winter Gem*, *Coleus thyrsoides*, *Senecio grandiflorus*, *Daphne indica rubra*, *Azaleas* in brilliant variety, *Primula kewensis farinosa*, *Freesias*, *Tillandsia Lindenii*, and a delightfully-flowered lot of *Camellias* in dwarf plants. Palms and tall, well-flowered specimens of *Acacia dealbata* lent additional charm to a very beautiful group.

Mr. H. Burnett, Guernsey, had an imposing group of Carnations, a central group of White Wonder being very fine. R. F. Felton, Marmion, Scarlet Glow, White Enchantress, Mandarin and Carola were particularly good and effective.

Messrs. Stuart Low and Co., Enfield, showed splendid pans of Cyclamen in deepest red, purest white, Salmon King, Giant Salmon, Giant White and others. Carnations from this source were also very fine, White Wonder, Beacon, Winsor, Gloriosa, Lady Alington, May Day and Fairmount (heliotrope) being very good.

Mr. C. Engelmann, Saffron Walden, staged a nice group of Carnations, of which Carola, Lady Northcliffe, White Perfection, Gloriosa and Scarlet Glow were the chief. La Mode, of the heliotrope class, was also shown, but was not attractive in the sombre light of the day.

Mr. G. Reuthe, Keston, Kent, had a delightful grouping of alpine and winter Croci, these latter including *C. Sieberi*, *C. Imperatii præcox*, *C. aureus*, *C. chrysanthus fuscotinctus* and *C. c. warleyensis*, a very charming plant with yellowish flowers marked externally with crimson. *Eranthis cilicicus*, *Adonis amurensis* and a colony of the early bulbous *Iris*es were also noted.

Messrs. J. Peed and Sons, West Norwood, S.E., exhibited a collection of alpine in pots, together with *Crocus* species of the winter-flowering set.

The Guildford Hardy Plant Nursery displayed a choice lot of things, early Cyclamen, *Saxifraga burseriana* major, *Adonis amurensis*, *Iris stylosa*, *Erica mediterranea hybrida*, *Lenten Roses* and the like.

Messrs. T. S. Ware, Limited, Feltham, exhibited alpine freely in pans, *Saxifragas* being prominently displayed. *S. Boydii alba* was nicely in flower. Hardy Heaths, *Lenten Roses*, *Dianthus Atkinsonii* and the early Cyclamen were also noted.

The Rev. H. Buckston, Sutton Hall, Derby (gardener, Mr. A. Shambrook), showed Cyclamen Mrs. Buckston, a most showy and prolific flowering variety of the *Papilio* set.

Mr. Leopold de Rothschild, Gunnersbury Park, Acton, W. (gardener, Mr. G. Reynolds), showed a superb lot of *Jasminum primulinum* on standard and tall-grown plants several feet high. The effect was very pleasing and good.

The Marquis of Salisbury, Hatfield (gardener, Mr. H. Prime), showed some grandly-grown examples of *Euphorbia jacquiniæflora*, the arching racemes of scarlet bracts being simply superb. A central group of *Saint-paulia ionantha* was exceedingly well flowered.

Messrs. Carter Page and Co., London Wall, E.C., staged a grand group of *Primula malacoides*, Persian Cyclamen and *Primula obconica*, all in freshly-flowered examples.

Mr. Philip Ladds, Swanley, had a well-flowered basket of the salmon Paul Crampel Pelargonium, which was very attractive.

Messrs. R. Gill and Sons, Falmouth, had a delightful exhibit of *Rhododendrons*, *Erica codonodes* and early Cyclamen, all of which were attractive. *Primula Winteri* was charmingly shown. From the same source came several dozen pictures.

The Misses Hopkins, Shepperton-on-Thames, had an exhibit of alpine with Primroses, Daisies, *Petasites japonicus*, *Lenten Roses* and other plants. Dry tubers of *Tropæolum tuberosum* were also displayed.

Messrs. Sutton and Sons, Reading, had a most admirable table of *Primulas* and Cyclamen, arranged in large groups in a most effective manner. Of the *Primulas*, The Czar (rich violet), Royal White (very fine), The Duchess and Reading Blue were among the choicest; while *P. obconica* (in superb colour) and *P. kewensis* were equally well shown. Of the Cyclamen, the firm's superb fringed were remarkable, a fantastic blending of crimson, scarlet and white, Cerise Queen, Giant Crimson and White Butterfly being conspicuous among the best of a very handsome lot.

Messrs. William Cutbush and Sons, Highgate, N., had a most effective grouping of greenhouse flowering plants and forced shrubs, *Magnolias*, *Lilacs*, *Daphnes*, *Azaleas*, *Prunus*, *Pyrus Malus Scheideckerii*, *Hamamelis* and others. *Iris histrioides major* and *I. Danfordii* were singularly beautiful among the hardy plants. Carnations, too, from this firm were very fine; and, indeed, one of the best contributions of these flowers staged on this occasion, Scarlet Glow, White Enchantress, Beacon, Mrs. Omwake, May Day, Mrs. L. Mackinnon (fine scarlet) and Countess of Lathom (crimson) being some of the best.

Messrs. H. B. May and Sons, Edmonton, had a mixed table of Ferns, *Begonias*, *Oleander splendens variegata*, *Eranthemum pulchellum*, *Ardisia crenata* and other plants.

Messrs. J. Cheal and Sons, Crawley, put up a miniature rock garden planted with alpine and dwarf flowering shrubs. Some very beautiful plants of *Rhododendron præcox* and the variety Early Gem, with rosy mauve flowers, were much admired.

Messrs. H. Cannell and Sons, Swanley, Kent, staged a collection of little-known *Begonias*, including *B. richardiana* *Vastissima* (small white flowers), *Ascotensis* (deep pink pendulous flowers), *Duchartrei* (large foliage and white flowers) and *hybrida floribunda* (small pink flowers, plants of *Fuchsia*-like habit).

Mr. L. R. Russell, Richmond, Surrey, staged a good batch of the pretty *Primula malacoides*, also *Prunus triloba* in full flower and *Azalea indica* Hexe, a free-flowering and deep red variety. *Jasminum primulinum* and *Buddleia asiatica* were shown in the background.

ORCHID COMMITTEE AWARDS.

Silver Flora Medals.—To Sir Jeremiah Colman, Bart., Messrs. Armstrong and Brown, Messrs. Stuart Low and Co., Messrs. Sander and Sons, Messrs. James Cypher and Son and Messrs. Charlesworth and Co.

Silver Banksian Medal.—To Messrs. J. and A. McBean.

FLORAL COMMITTEE AWARDS.

Silver-gilt Banksian Medal.—To Messrs. Cutbush, Highgate, for miscellaneous flowering and foliage plants.

Silver Flora Medals.—To Mr. H. Burnett, Guernsey, for Carnations; Leopold de Rothschild, Esq., C.V.O., Gunnersbury Park, Acton, W., for *Jasminum primulinum*; and the Marquis of Salisbury, Hatfield, for *Euphorbia jacquiniæflora* and *Saint-paulia ionantha*.

Silver Banksian Medals.—To the Rev. Buckston, Derby, for Cyclamen; Messrs. Gill, Falmouth, for *Rhododendrons*, &c.; Messrs. Low, Bush Hill Park, for Carnations, &c.; Messrs. May, Upper Edmonton, for Ferns, &c.; Mr. L. R. Russell, Richmond, for flowering shrubs; Messrs. Sutton, Reading, for *Primulas*; and Messrs. Veitch, Chelsea, for greenhouse plants.

Bronze Flora Medals.—To Messrs. Barr, Covent Garden, for hardy plants; and Mr. Bell, Guernsey, for Carnations.

Bronze Banksian Medals.—To Messrs. Cannell, Swanley, for *Begonias*; Mr. C. Engelmann, Saffron Walden, for Carnations; and Messrs. T. S. Ware, Feltham, for alpine.

SCOTTISH HORTICULTURAL ASSOCIATION.

THE annual business meeting of the Scottish Horticultural Association was held in the hall of the Young Men's Christian Association, St. Andrew Street, Edinburgh, on the evening of January 16. There was a large attendance, under the chairmanship of Mr. W. H. Massie, president. The annual report, of which a summary has already been given in our columns, was submitted by the secretary and treasurer, Mr. A. D. Richardson, and was approved of on the motion of Mr. Comfort. Mr. King, convener of the finance committee, reported regarding the funds, and this report was also adopted. The office-bearers and members of council were appointed, the former being: Hon. president, Captain A. Stirling, Keir; president, Mr. W. H. Massie; vice-presidents, Mr. D. W. Thomson and Mr. J. Dobbie; secretary and treasurer, Mr. A. D. Richardson. The president submitted the new constitution for the association, and Mr. D. Mackenzie moved an addition to provide for the association becoming an approved society under the Insurance Act, if thought advisable, and this was accepted. A lengthy discussion arose as to the proposal to limit the privileges of admission of the half-crown members to one ticket.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Royal Gardeners' Orphan Fund.—The annual general meeting of the subscribers to this Fund will be held at Simpson's Restaurant, Strand, London, W.C., on Friday, the 9th inst., at 3 p.m. The report of the committee for the past year will be presented, officers for the ensuing year elected, and eighteen children will be elected to the Fund. The poll will close at 4.30 p.m.

Protecting Alpines from Slugs.—In early spring, when the weather is mild and moist, we should be on the watch for slugs and snails, which may destroy our rock plants. All slugs we can see should be destroyed, and those plants which are especially liable to attack should be surrounded by little rings made of perforated zinc or common zinc cut round the edges to present sharp points to the invaders.

Proposed Exhibition of South African Fruits.—The Rev. W. Wilks, secretary of the Royal Horticultural Society, informs us that the following cablegram was received on January 22 by the High Commissioner in London for the Union of South Africa from the Department of Agriculture, Pretoria: "Owing to unforeseen circumstances regret Government compelled to abandon exhibition." No further explanation has yet come to hand, but it is necessary to abandon the exhibition accordingly. All notices appearing in the society's Book of Arrangements, on Fellows' tickets and elsewhere are cancelled.

Rhododendron præcox.—Among early shrubs there is nothing more beautiful than *Rhododendron præcox*. It is wreathed in spring with many lovely rosy flowers of exquisite texture and shade of colour. Once seen in perfection it is always remembered, and its opening is eagerly watched for. The early *Rhododendron* is quite hardy, but its flowers are oftentimes spoiled by frosts. With small plants, a handlight put on in the evenings when frost threatens and removed when the frost disappears is a precaution well repaid. Larger bushes cannot be treated in this way, and it may be necessary to employ mats or similar protection in severe weather when the shrub is in bloom.

The Winter Heliotrope.—The fragrant flowers of the Winter Heliotrope (*Petasites fragrans*) warrant the plant a position in the garden, for they open in January and scent the air for some distance. Essentially a subject for the wild garden, or for a position where a choice plant would not thrive, the Winter Heliotrope is not exacting in its requirements, for it thrives on fairly dry, poor soil, and also about the margins of a lake or stream where it may be occasionally covered with water. It varies considerably in height, according to the quality of the ground in which

it is growing, and may be seen at any height from 3 inches or 4 inches to upwards of 1 foot. The lilac flowers are borne in strong, upright panicles, and are over before the large, rounded leaves develop. A plant or two introduced into the garden will soon develop into a large clump, and give no trouble other than restricting its growth when it is likely to grow out of bounds.

Saintpaulia ionantha.—Such a delightful group of this charming little Gesnerad as was shown from the gardens of Hatfield House on January 23 at the Royal Horticultural Hall should serve to still further direct attention to it as a charming winter-flowering plant. It is of easy propagation, while its cultural requirements are not at all exacting. If the leaves are put in as cuttings, they quickly form plants, while seed is also readily obtainable. Raised in this way, there is, however, frequently a certain amount of individual variation, while from leaf-cuttings one need increase only the very best forms. Those shown as above-mentioned represented a particularly fine, richly-coloured type. Like many other gesneraceous plants, this *Saintpaulia* thrives best in a compost containing a fair amount of leaf-mould. An intermediate temperature suits it well. It is a native of the Usambara Mountains in Central Africa, and has been cultivated in this country for some years. Some of the more distinct forms have been grown separately, but the most striking is that with rich bluish purple flowers.

The Fuchsia-flowered Begonia.—While the tuberous-rooted section of *Begonias* and the hybrids of *B. socotrana* are far more popular than they have ever been before, most of the fibrous-rooted kinds are at present overshadowed by their younger relatives. The species at the head of this note, *B. fuchsioides*, is quite an old plant in gardens, having been introduced from New Granada over sixty years ago. It forms a stout rootstock, whence are pushed up succulent stems, whose secondary branches are clothed with ovate deep green leaves 1½ inches or thereabouts in length. When young the leaves have a reddish tinge. The flowers, which are borne in branching panicles, are drooping and of a rich deep scarlet colour. They are not large, but are particularly bright and effective, their value, too, being enhanced by the fact that they are borne during the winter months. This species succeeds best in a warm greenhouse or intermediate temperature. It was one of the parents of *Corbeille de Feu*, a garden variety which is much used for summer bedding as well as for growing in pots for decorative purposes, under which last conditions it may be had in bloom all the year round. Many of these fibrous-rooted *Begonias* are so beautiful that if they were taken in hand by some of our cultivators and well grown, they would, we feel quite sure, be more valued than they are now.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Pelargoniums in the Open in January.—I was much interested in your leading note in "Notes of the Week," issue January 20, on Zonal Pelargoniums growing in a window-box in an Essex garden. In my garden in Hampshire there are some plants growing in boxes very nicely and without any protection. They have been exposed to 6° or 7° of frost, and are not damaged; but, of course, this part is, naturally, somewhat warmer than Essex. A number of winters ago I had some Zonal Pelargoniums and Pteris Ferns in a window-box which remained out all the winter and grew again freely the following spring, but the weather was never really severe at any time.—B.

Camellia magnoliæflora.—I was so pleased to see a very good illustration of *Camellia magnoliæflora* in THE GARDEN for January 20. When I was at Pallanza in 1902, I got a plant of it from the nursery garden of Fratelli Rovelli, who were then offering it as a new plant, and very distinct in form. It was then a very small grafted plant, which I grew on, and about two or three years ago I showed it before the floral committee of the Royal Horticultural Society; but, as it was not an orthodox cast-iron *Camellia* in form, it obtained no award. But Mr. Watson, the Curator at Kew, saw it and asked me how I got so large a bush of it, saying they had only got a small plant at Kew. Mine had about twenty blooms open, besides buds. I consider it a delightful plant and flower, both in form and colour. I got at the same time a pod (?) of *Camellia* seed and sowed it in 1902; this year it is about to flower profusely from each point. Nine years is a long time to wait patiently, or perhaps impatiently, for it to flower.—J. T. BENNETT-POE.

Iris stylosa.—Mrs. Walkinshaw does well to draw the attention of readers to this charming flower in THE GARDEN for January 20. It is so easily cultivated that I wonder it is not more grown. The foot of a south wall, no matter how low, is, without doubt, the best site, although in some localities where sand is the chief soil it flourishes quite in the open, as around Cromer, where I have seen large patches of it. No outdoor flower can give more pleasure than this.—E. M.

— I was much interested in reading the note on *Iris stylosa* in your issue of January 20. So few people seem to know of, or to grow, this exquisite winter *Iris* that too much attention cannot be called to it. Here it requires no care of any sort, and the poorer the soil the more it flowers. A sunny aspect on a dry bank is the best position, but I have some in partial shade and some in damp soil which also flourish. This winter has been an exceptionally favourable one, owing, no doubt, to the well-ripened roots after the hot summer we have had. Of the common blue variety I have six clumps varying in age from three to six years, and from these I have gathered daily since Christmas an average of thirty blooms. To-day I picked actually fifty-four, and could easily have doubled that amount. I also have a few roots of the white form with its exquisite Orchid-like flowers, and a clump of the dark purple variety, *Iris stylosa speciosa*, which I have never previously known to flower before March, but which this year is now (January 21) in full bloom. The flowers are best gathered as buds, which open directly they are brought indoors. When I send

them away by post, I roll each bud in a small piece of tissue paper to ensure its not opening on the journey and thus getting bruised or broken, as the petals are delicate and brittle. I then tie the bunch in its array of paper caps securely to the bottom of the box; in this way the blooms arrive in perfect condition.—VECTIS, *Niton, Isle of Wight*.

Pear Backhouse Beurre.—I was somewhat surprised to read the note upon this Pear in THE GARDEN for January 27, because I had supposed that it was long ago recognised that it was nothing but Beurré d'Amanlis. It must be five-and-twenty years (perhaps more—I have no notes) since I went to York to investigate this supposed novelty, and in company with the manager of the fruit tree department (Mr. Grey, I think) examined the original tree, the growing stock and the fruit, and quite convinced my guide that whatever the graft was supposed to have been, it could have been nothing but Beurré d'Amanlis.—A. H. PEARSON, *Lowdham*.

— In reference to the note on Pear Backhouse Beurré, I saw the tree on a lodge at York many years back, and also proved it in our nurseries to be Beurré d'Amanlis, and the foreman there at the time admitted it was so.—GEORGE BUNYARD, *Maidstone*.

Deep Planting of Fruit Trees.—May I just ask those who from time to time advocate the deep planting of Apples on Paradise stock this simple question, What is the value of a dwarfing stock if you bury it so deeply as to destroy half the roots and allow the scion to make roots of its own? I always say, plant the same depth as the tree was in the nursery; and as to the graft swelling more than the stock, I do not think this is very material. I have seen trees in which the graft was much thicker than the stock flourishing and carrying fine crops for forty years.—A. H. PEARSON, *Lowdham*.

— I notice Mr. Wadd's remarks as to trees failing under these conditions, and beg to say, although I very strongly recommend, and indeed insist on, Apples on Paradise and Pears on Quince being planted with the junction of stock and scion 3 inches below the ground-level, yet I quite as firmly insist that Pears on Pear, Apples on Crab, and all stone fruits should be planted at the same depth as in the nursery, the soil-mark being the guide. Frequent loss is caused by deeper planting; such trees being budded 9 inches to 12 inches from the ground must be grown so. How frequently one sees in private gardens Peaches with soil up to the lower branches, because the borders are constantly enriched, so that the needful stems are buried. I once saw 100 Peach trees in a house, of which 90 per cent. had died from this cause, the ten being the only ones properly planted.—GEORGE BUNYARD, *Maidstone*.

— I have had considerable experience in the planting of fruit trees and in dealing with those newly planted by other persons. So far I have not seen any good results from deep planting, and should never advise inexperienced cultivators to bury the stems of the trees. During the first year I have seen trees with several inches of the stems buried do well enough; the second year they began to give trouble and continued to do so, and I found the bark under the soil-level thin and in a bad condition. In some clayey soils, trees too deeply planted did not grow at all satisfactorily; whereas others, planted almost on the surface in similar soil in

the same orchard, moulded over and securely staked, did remarkably well. My advice to those who have had no practical experience in the planting of both fruit and other kinds of trees has always been to replant to the soil-mark showing on the stems when received from the nursery, to surface mulch and stake well, and to top-dress in the following years on soil previously deeply trenched.—B.

— I do not agree with the last sentence of the note on this subject on page 31 (January 20); in fact, in practice I reverse operations—Crab in shallow soil and Paradise in deep soil. On a deep soil the trouble is that Crab will go down, and then one must root-prune or wait years for the trees to mature before bearing much fruit, except in the case of a few sorts, such as Early Victoria, Lane's Prince Albert and Stirling Castle, which seem to me best on free stocks, even in deep soils, because they are varieties which bear so freely that one cannot get too much root-power to make the tree and carry its crop. On Paradise, in deep soil, one finds sufficient roots go down to sustain the tree through a trying summer; whereas on a shallow soil it is not so, and therefore we plant on such soils trees on Crab stocks, finding that they make plenty of fibrous roots and get a few roots down into the subsoil to keep the tree going.—APPLE TREE GROWER, *Kent*.

The Variegated Aubrietias.—While the Aubrietias with variegated foliage do not flower so freely in spring as those with green leaves, they are specially valuable in winter because of the bright effect they give at a flowerless time. So far as I know, there are only two varieties of this class, these being both forms of *A. deltoidea*, although sometimes offered as varieties under the name of *A. purpurea*. The flowers are small and comparatively dull as against those of the newer varieties now so numerous, but they are satisfactory enough to be useful. It is in the colouring of the leaves that the charm of these varieties lies, and in winter the variegation seems brighter than at any other time. *A. deltoidea variegata argentea* has its leaves prettily variegated with silver, and looks extremely well over a dark stone on rockwork or on the wall garden.—S. A.

Evergreens for Town Gardens.—I was pleased to see the remarks made by "H. P." in THE GARDEN for January 20 on the above subject. When I wrote the article appearing in the issue for December 30, 1911, I had in my mind the hesitancy with which many amateurs embarked on the operation of ornamental shrub-planting in or around the suburbs of our large towns, and I hoped it would elicit further information from observant readers as to suitable shrubs which I have not had the opportunity of noting. "H. P." mentions *Fatsia japonica* as doing well with him. I also know of two quite large specimens in this town. They are both in the same street, in front gardens, planted on the sunny side, but I have never seen them in flower. I have always deprecated the too free planting of the Laurel, for reasons stated in my previous article, and pushed the merits of the *Aucuba* in its place. Privets occasionally here are entirely denuded of foliage, generally during severe frost accompanied by heavy fog, notably during the very severe snap at the end of November, 1904, when over 20° of frost were registered, and on December 31, 1908, when 19° were registered, heavy fog being experienced on both occasions.—J. C. WADD, *Belgrave, Leicester*.

The Apple as a Market Crop.—From seeing one example of Apple-growing in a farmer's orchard, is Mr. Thomas justified in writing the last paragraph on this subject (page 36), in which he says, "Is it any wonder that Apple-growing is becoming popular among farmers?" If he had the experience among farmers that I have had, I think he would hesitate before penning such a note. Possibly I live amid a set of dull people outside the farming interest, but I can safely say, even though we live within a few miles of two large seaport towns, the farmers who grow Apples in an intelligent manner are quite few in number. Here and there you may come across a man with a knowledge of the subject; but the bulk of them, if they were spoken to about planting Apple trees, would say, "Shall I get a crop next year?" How useless, too, it is for the ordinary tenant-farmer, with his two years' agreement, to think of planting Apple trees. Now comes the crux of the whole question. How can the fruit be profitably disposed of? When men who are fruit-growers cannot answer this question to their own satisfaction, how can the farmer be expected to? Mr. Thomas thinks because quantities of fruit are obtained, it is equally easy to sell. That is not so, as the farmer would quickly find out if he had experience of the subject. —E. M. [Considering that many thousands of tons of Colonial Apples are being imported yearly, there ought not to be a great difficulty in disposing of really good home-grown fruit.—ED.]

Sweet Peas Too Much Alike.—I observe under the above heading, in your issue for January 20, Professor Biffen animadvert upon the "amazing capacity some raisers have developed of detecting minute differences between their own varieties and those already in existence." He further says that his only means of distinguishing them are their labels and, as a sarcastic friend of his remarked, the prices. As one of the down-trodden class of raisers, I hope you will permit me to reply to these remarks, especially as your contributor appears to doubt the possibility of further advance in the improvement of the flower. I do not see why, as regards the possibility of further improvement, the Sweet Pea should not progress as other flowers have done; but it is obvious that, as Nature does not often make miraculous bounds, advancement can ordinarily be attained only by the progressive detection of minute differences, a method which has yielded, looking back ten years, such wonderful results. Inability to see such differences has not, however, always been your contributor's infirmity, or we should not have had such varieties as Zero, Zara, Zoe and Holdfast Belle, which I brought out for him. The last, for instance, is stated by the person he quotes to be simply another name for Mrs. Henry Bell; also, on the same authority, we may take it that Zero is another name

for Etta Dyke. If, however, your correspondent is unable to see differences except in his own handiwork, it goes to prove what I have long thought, viz., that many men who deal in flowers have not a sufficiently good eye for colour to appreciate differences and delicate beauty, and that such work is where women may excel. Your contributor, for instance, unsparingly condemned Evelyn Hemus both before and after I showed it! The article ends by suggesting to the National Sweet Pea Society, among other things, that amateurs should carry out the task of reporting upon varieties. With this I agree, but I consider that the "quasi-novelties" should not be judged by quasi-amateurs. Reform in the

HOW TO EXHIBIT SWEET PEAS.

AFTER mastering the various difficulties in connection with the successful cultivation of Sweet Peas for exhibition, the exhibiting of them should not be a very great problem. One of the best lessons that the prospective exhibitor could have is to go to a show and watch how the experienced exhibitor has brought his flowers to the exhibition, the manner he has them packed, how he arranges them in the vases, and how he disposes the various colours about his exhibit so as to get the most pleasing effect from the material at hand; but, better still, if he could go to a friend's garden and see all the details as to cutting and packing, he would then have all the experience necessary without having to bother about reading up the matter or paying for his experience by having a batch or two of flowers spoilt by bad packing or bad setting up. Unfortunately, everyone is not able to gain experience in this way; so probably a few short notes under this heading may help those who are thinking of making their *début* as exhibitors. The care of the plants just previous to an exhibition must always be of vital importance; everything must have been done to ensure them being in a good vigorous condition, and according to the nature of the weather prevailing, the old flowers must be removed some two or three days beforehand, thus ensuring that no stale flowers are used.

Shading is another little matter that must be attended to, and whatever varieties it is necessary to shade should be covered immediately all the old flowers have been removed. A light piece of tiffany well above the flowers is all that is necessary, anything of a heavier nature being apt to rob the flowers of colour rather than to help it. Too much shading is very detrimental, and only those varieties that are known to burn badly should be shaded at all, though it might be permissible to protect one or two of the mauves and pale blues in the event of very wet weather, these two colours being very apt to spot, especially if the flowers are packed damp and they have to travel any distance. Strong doses of artificial

manure should be avoided just previous to a show, and certainly should not be given within a fortnight of a particular show where, perhaps, every point is necessary to secure an award. During a wet spell the colour is terribly lacking in Sweet Peas that have been overfed with artificial manure; hence the above advice.

Cutting the Flowers.—The blooms, if possible, should be cut when quite dry, and during the operation they must be held quite loosely in the hand, as they will bruise if held tightly and in too large a bunch. To the experienced hand this little bit of advice is not at all necessary; but who has not seen a novice holding the stems tightly close



A SNAP-SHOT OF MR. ROBERT SYDENHAM, PRESIDENT OF THE NATIONAL SWEET PEA SOCIETY, AT THE SWEET PEA TRIALS, SUTTON GREEN, LAST YEAR.

National Sweet Pea Society can, however, come only from within the tabernacle and not by advice from a coign of vantage without.—HILDA HEMUS.

FORTHCOMING EVENTS.

February 5.—National Chrysanthemum Society's Annual Meeting at Carr's Restaurant, Strand, London, at 7 p.m.

February 6.—Royal Horticultural Society's Meeting and Exhibition.

February 9.—Royal Gardeners' Orphan Fund. Annual Meeting at Simpson's Restaurant, Strand, at 3 p.m. Manchester Orchid Society's Meeting.

February 10.—Chester Paxton Society's Meeting.

under the flowers when he only ought to be holding them lightly by the ends of the stems? After cutting they should be placed in water in a light, airy room or shed, and, if at all wet, placed thinly in the vases to allow the air to dry out as much moisture as possible. Here they can remain until the time for packing; but if they have to travel far, two or three hours in water will not be too long.

Packing.—To prevent bruising, the packing must be carefully done, and though some growers favour packing the bunches upright, I do not think it is really necessary, unless the flowers have been cut very much on the young side. In ordinary circumstances, packing flat in either light boxes or hampers will do well; but unless the blooms are to go only a very short journey, more than one layer must not be put in a box, though the closer they are together in this one layer the better, so that they do not move about in transit and bruise in that way.

Arranging Flowers at the Show.—The setting up at the show is a source of worry to some people; but if the would-be exhibitor wishes to be an adept at this, he must get a few vases similar to those used at exhibitions and practise setting up at home. He will then get to know exactly how to start and finish a vase without having to shift the flowers after he has once placed them. A few Rushes or Asparagus foliage in the vases will prove a great help in this matter, and if a few vases are arranged, say, twice a week for two or three weeks, by the time the show comes round the matter will be quite easy. It is wise to arrange your colour-scheme at home, putting the same down on a piece of paper, and then as you unpack the blooms at the show they may be put in vases and placed in their proper position without having to keep moving them about, to the discomfort probably of the exhibitors on either side of you.

Arrangement of Colours.—In arranging a colour-scheme one should try to get a nicely-balanced group, with the bright or dark colours distributed fairly evenly over the exhibit; and should one be short of these, keep them away from the edges of the exhibit, whether it is large or small. Work them more in the centre, when the lack of them will not be so noticeable. In a class of twelve bunches, for the exhibit to be strong one bunch only should be chosen from the various colour classes; but as there are four different classes of pinks—blush, pink, cream pink and deep cream pink—three of these may with advantage be used, as among the pinks we have some of the very finest quality Sweet Peas.

Quality of the Blooms.—Perhaps I had better try to explain my idea of quality in Sweet Peas. A Sweet Pea to be of good quality must, in the first place, be of full size, not gross and coarse,

with all the edges of the standard marked through opening unkindly, but with a good open single standard, clear and good in colour, with plenty of substance in both standard and wings. The latter should not be too open, but inclined towards you and partially covering the point or apex of the keel. The stem should be stiff and anything from 12 inches to 16 inches in length; but, after this, extra length is rather more detrimental than otherwise. The blooms should not be too far

THE IMPROVEMENT OF SWEET PEAS.

THE publication of the sixth edition of Sydenham's "All About Sweet Peas" removes one of the greatest difficulties from the path of the perplexed Sweet Pea grower. In it the policy has been adopted of grouping together all those varieties which, in the opinion of the author, are too much alike. With such a list before one, selections of varieties can be made with confidence, knowing that there is no longer the possibility of growing the same sort under two or more different names. It is surely a good omen that this has been published in the same year in which its author becomes president of the National Sweet Pea Society. Many of us will hope that the extended opportunities the society's trials offer will lead him to continue this work and help still further to stem the endless flood of quasi-novelties.

Even to those who grow on a large scale, Sydenham's list may prove something of a revelation. To mention a few colours only: Etta Dyke heads a group of no fewer than twenty-two waved white varieties; Mrs. Charles Foster, of twenty-six waved lavender; Black Knight Spencer of twenty-one waved maroon; while Clara Curtis already has sixteen waved cream counterparts. It is hard to believe that even the raisers found differences enough in the "novelties" they marketed to warrant quite so many in each of these sections. Yet the process of distributing these too-much-alike "novelties" will go gaily on this season.

The National Sweet Pea Society's trials contained some 250 of them, and with the best will in the world the judges could only find seven worthy of any award. Small as the proportion seems, many are, nevertheless, of the opinion that more than one of these favoured sorts is but an old friend under a new name. Such a state of affairs would make one pessimistic as to the possibilities of further improvement, had not one seen

here and there a few outstanding varieties. We must, however, look forward to a slower rate of progress in the immediate future, for the waved standard has now been obtained in conjunction with every colour known in Sweet Peas before its advent. Further, we can hardly expect much in the way of distinct colour "breaks," for there can be little doubt that the professional and amateur hybridisers have crossed all known colour shades together repeatedly. The fact was impressed on me some three seasons ago, when no fewer than 180 crosses showing distinct colour combinations failed to produce a solitary shade that could fairly be called new.

The raisers whose one interest is the production of novelties, apart from any considerations of improving the types now grown, still have a fertile



SWEET PEA MRS. R. HAILAM, A STRONG-GROWING VARIETY SUITABLE FOR EXHIBITION AND GARDEN PURPOSES. COLOUR, SOFT SALMON PINK ON CREAM GROUND:

apart on the stem, but should nearly touch one another. With really good flowers twenty blooms are sufficient to make a good vase all round, and then, if it comes to taking out individual vases for comparison, the all-round vase is bound to score, providing, of course, the blooms are all fresh and clean. After the setting up has been done and the colours arranged quite satisfactorily, the vases should be looked over to see that no vase contains more than one variety, as this is often the cause of disqualification. The vases should be correctly and neatly labelled, and any rubbish that may be left on the stage should be cleared away, so that the whole exhibit and its surroundings look neat and tidy.

THOMAS STEVENSON.

Woburn Place Gardens, Addlestone, Surrey.

field before them. We still lack Spencer forms of the Bush and Cupid types! To raise them is the merest child's play. All that is necessary is to cross similarly-coloured Spencers with the Bush or Cupid type, and then, a year after raising the hybrid, one can pick out the required Bush or Cupid type ready fixed. These Spencer Cupids possess all the bad features of the old type, and even shed their blooms with equal facility. The Bush types, too, still require support, and are in every respect worthy counterparts of the old type.

Cambridge.

R. H. BIFFEN.

ARRANGEMENTS OF SWEET PEAS ACCORDING TO THEIR COLOURS.

THE year 1700 gave the Sweet Pea to Great Britain; 1900 saw the celebration of its bicentenary. The Crystal Palace was the arena, and the measured mile of Sweet Peas attested to the advance made. The colours

which met the eye were a marvel; but the last eleven years have added almost countless new varieties and all shades of glorious colours to the list. The Sweet Pea has revolutionised the world of gardening, and from palace to cottage it reigns in all its glory. In the different varieties we get nearly every shade and tone of colour save yellow, and when the grouping in hedge or clump is rightly done, what perfect harmony meets the eye!

May I suggest that the massing of colours should be carefully studied, or the general effect will be lost. Hedges with a background of shrubs of any dark green foliage might take all gradations of reds, scarlets, crimsons and pinks; then maroons, purples, mauves, violets and lavenders; followed by oranges, salmons, creams, blushes and whites. Self colours are happier in company, and marbled and striped varieties should, I think, make a hedge of themselves. Clumps, too, are to be desired, and they give the most effective colour-schemes. The length of the hedge or hedges and clumps must vary, of course, with the size of the garden; but be the garden large or small, it may be made the garden beautiful. Look down from the upper windows of a house upon the fairy scene, the afterglow of a summer's evening painting and intensifying the glowing colours of the Sweet Peas and making one's heart glad to behold so wondrous a picture, the clumps looking like so many gipsies' tents ablaze with glory.

I saw last summer a wonderful piece of Sweet Pea gardening and grouping of colour in clumps—no jarring note to mar the harmony. The clumps were pitched with living Hazel branches 5 feet to 6 feet high, and these wigwams, if I may so call them, were perfectly distinct in their identity. The Sweet Peas ran high above the sticks, throwing their beautiful tendrils and blossoms fantastically about as if they "enjoyed the air they breathed."

Sweet Peas as climbers on houses over trellis-work are worth the trouble of trying—on grey stone or stucco with scarlets, reds, crimsons and pinks; on red brick, mauves and lavenders would be in perfect harmony; and on buildings, Sweet Peas will run in picturesque confusion.

If seeds be sown for clumps, March is soon enough; but if in pots under glass or in a cold frame, February. Plant them out in the middle of May in rounds about two feet in diameter. Arches and pergolas lend themselves most artistically to the support of Sweet Peas, though they prefer the living Hazel to climb upon. We owe much to the National Sweet Pea Society (the outcome of the bicentenary), and to the pioneers of the Sweet Pea cult whose skill and patience have wrought such marvels in the scientific treatment of this widely-known and deservedly-loved flower of the people.

H. C. PHILBRICK.

HOW TO GROW GOOD SWEET PEAS.

WHEN you, Mr. Editor, asked me to write an article for your Sweet Pea Number, I hesitated,

of September, for the following reasons: I find that seeds germinate much better than they do in, say, the first week in February. The temperature of the soil is much warmer, the plants showing in a fortnight or three weeks, according to the season. This year, by the way, has beaten all records so far as growth and germination are concerned, and in many of my boxes I have 100 per cent. of the seeds sown now nice sturdy plants, and one cannot do better than that. This is due to the fine summer and the splendid conditions for harvesting the seed. Then, again, autumn-sown plants are far stronger and have more roots than spring-sown ones; they bloom about two weeks earlier, and I am certain give better flowers; and, above all, are more able to resist disease and stand the checks they get by sudden changes in temperature, provided, of course, they have been kept very hardy all through the winter and not coddled in any shape or form.

I know that many growers who sow in the end of January and start their Sweet Peas in a heated greenhouse, then remove the plants to cold frames before they are at all drawn up and nicely harden them off, have almost as good results; but I have not this accommodation for the quantity I grow, so the autumn is the time for me. The pleasure I get in watching the plants during the dull winter months counts for something also.

Soil for Sowing.

—A week or so before sowing, prepare the soil, which consists of good turfy loam that has been stacked up to mellow, passing it through a coarse sieve, and then mix some good leaf-soil with it and add a small quantity of sand, well mixing the whole together. I do not use any manure, as seedlings do not want it, provided you get the right sort of fibrous loam. I use large wooden boxes, such as Sunlight Soap boxes, so easily obtained from the grocers or oilmen. These are, of course, fairly deep, and are rather heavy for lifting about; but it is important that there should be plenty of room for the roots of autumn-sown Sweet Peas. Do not forget to make holes in the bottom for drainage, and crock the boxes as you would for pots. Press the soil fairly solid; this is necessary, as a loose soil causes the plants to be soft and weak. When sowing the seed I use a handy little tool of my own device, made of wood, something like a rake, with large, blunted teeth half an inch in length. When well pressed down on the surface of the box this makes holes at equal distances and of equal depth, rendering it very easy to drop in the seeds, the holes being

about two inches apart. Cover up the seeds with about half an inch of soil, and press down with a block of wood. Label each box and mark on the back of the label the number of seeds in each, as it is interesting to be able to count the failures or successes, as the case may be. The boxes are now placed in rows with alleys



A SNAPSHOT OF MR. W. ATLEE BURPEE, PRESIDENT OF THE NATIONAL SWEET PEA SOCIETY OF AMERICA, IN THE BACKGROUND, AND MR. HUGH DICKSON IN THE FOREGROUND. TAKEN AT SUTTON GREEN LAST YEAR.

thinking that there was nothing that had not already been written about this most beautiful and popular flower. But I could not refuse your request, and so here are a few notes on the plan that I adopt in growing my Sweet Peas.

Sowing the Seed. First of all, I am very keen on autumn sowing, so my year begins at the end

so that I can get among them easily, putting black cotton over them to keep the sparrows off. Of course, one Pea in a pot is the ideal, where possible; but as I have now over eight thousand plants, this is quite out of the question, and still more so in the case of a relative of mine some few miles away, who has over thirty-five thousand plants, grown in the same way. I tried the paper pots last year, with anything but happy results, some of my choice seeds being wasted through the moulding of the pots, which there seemed no way of preventing. I place pieces of Carrot about the boxes to attract the slugs, which, unfortunately, are only too plentiful. While they are enjoying the Carrot, though not exactly "improving the shining hour," at least they are not eating my Sweet Peas. Look out for mice, which are almost certain to visit you. I set the "break-back" or "Little Nipper" traps. On the weather becoming cold I fill all the available cold frames with the boxes, and make a temporary shelter for the others with oil sheeting, placed on wooden supports, which is rolled up every morning, or when not required to keep off heavy rain. This also protects them from a certain amount of frost. But frost does not hurt Sweet Peas. I have seen my seedlings laid down flat, like dead

men, during a sharp frost; but when the thaw came they stood up, and were as right as ever in a few days. It is the damp and sudden changes that are harmful to them. If the soil in the boxes gets stagnant or green on the top, scratch it up with a sharp-pointed

stick; this is equal to hoeing them in their later stages. The tops are pinched out of all my plants; this makes the side growths much stronger.

Planting-Out.—Early in April planting-out-time comes. Choose the right days, according to the state of your ground and the weather. In the

the varieties that are similar in colour next to each other for easy comparison.

Sticks for Supports.—I use the ordinary Pea-sticks, which are easily obtained round here, and have never used wire or wire-netting or any other support. Short, branching sticks are stuck in directly after planting, and the taller ones

put in later. Readers may ask, Why take all this trouble about planting out; why not sow in the ground? The answer is, The plants are much earlier, and you start with a perfect plant to begin with, whatever happens afterwards. I believe that Sweet Peas are something like children, and should have time and attention given them in their early stages. Having had a good send-off, they will continue to grow up in the right way. To conclude, we are proud that our county of Essex is taking such a leading place in the growing of Sweet Peas for seed purposes. Many of the large growers have found the soil and climatic conditions more suitable than in other parts of England. As many growers are aware, a vast area is devoted in the county to growing Sweet Peas for seed, several large wholesale houses having their seed grounds in the Kelvedon district. Many exhibitions in the country also make a special feature of classes



THE NEW SWEET PEA MRS. CUTHBERTSON; COLOUR, BLUSH PINK ON WHITE GROUND.
A BEAUTIFUL DECORATIVE VARIETY.

garden I grow the Sweet Peas in double rows 1 foot apart each way and 6 feet between the rows, the ground being well trenched during the winter. In the field the plants are put in with a trowel 10 inches apart in single rows and 5 feet between the rows, which run north and south. I plant

for Sweet Peas, and at Chelmsford last year there was a very good and comprehensive display. The weather is out of our control; last year was too dry. Let us hope that this summer will hit the happy medium.

Ingalestone, Essex,

E. H. CHRISTY.

COLOURED PLATE.**PLATE 1444.****FOUR GOOD SWEET PEAS.**

THE coloured plate presented with this issue represents four good varieties of Sweet Peas that are worthy of inclusion in every garden. Isobel Malcolm is an exceptionally pretty cream-coloured variety, slightly paler than Clara Curtis in most localities, though in others it comes quite as deep a shade of cream or pale primrose, and is of better shape. It was raised by Mr. Malcolm of Duns in 1909. Among Sweet Peas of mauve colouring Bertha Massey is destined to take a prominent place. It is a pleasing shade of this colour, and last year was shown in very good condition by the raisers, Messrs. Bide and Sons of Farnham. Scarlet Monarch is the best waved scarlet Sweet Pea that we know, excepting, perhaps, the new Scarlet Emperor, which we have not yet had an opportunity of testing. Scarlet Monarch (Stock D 13) in the National Sweet Pea Society's trials at Guildford last year was considered by many to be the best and truest scarlet variety there. It was raised by the late William Deal of Kelvedon in 1910, and he thought a great deal of it. Certainly its colour stands well in the sun, and the flowers are large and of good form. The fourth variety, Thomas Stevenson, is a good Sweet Pea named after a good man. Undoubtedly it is the best of the orange varieties, and when shown in 1910 under the name of Orange King created quite a sensation. This name was subsequently changed to Thomas Stevenson, as it was found that there was already one named Orange King in existence. The flowers are large, of good form and substance, and the colour is very intense. It received a first-class certificate last year from the National Sweet Pea Society, and was reserved for the silver medal offered under certain conditions for the best new Sweet Pea of the year. It was raised by Mr. Holmes of Tuckswold, Norfolk, in 1910.

TREES AND SHRUBS.**ORNAMENTAL VINES.**

IN recent years quite a number of ornamental Vines have been introduced. Most of them are natives of China, and those that prove hardy are likely to make quite a new feature in the gardens of this country. The accompanying illustration shows a group of Vines trained on rustic poles in the woodland garden at Kew. The ground-work consists of China Asters, and in late summer, when the foliage of the Vines begins to assume its bright autumnal tints, such a colour combination as this is most effective and harmonious. These Vines are mostly of rapid growth, and in consequence are useful for covering pergolas, arches, fences, buildings, columns and such like. At Aldenham House, where these Vines are grown

most successfully, they are trained to cover poles linked together by drooping chains, and the effect is very pleasing indeed. Among the best species and varieties are *Vitis Coignetiae*, *V. vinifera purpurea*, *V. armata*, *V. a. Veitchii*, *V. flexuosa Wilsonii* and *V. Thunbergii*.

THE ROSE GARDEN.**LIGHT *versus* HEAVY PERGOLAS FOR ROSES.**

NO one who has seen the light and elegant series of Rose arches spanning the walk close by the rock garden at Kew Gardens can ever desire to have the heavy, ponderous arrangement too frequently met with. I am thinking now of a pergola or arches especially for Roses. An arrangement of thick columns of

and does not appear to harm the growths, yet I would advise that thin Bamboo canes be placed against the gas-piping, so that the Rose growths do not come in too close contact with it. These uprights are some ten feet or so in height, and are set about twelve feet to fifteen feet apart. The cross-pieces spanning the path, which is some ten feet wide, are also of gas-piping, and the arches are connected along the sides by a series of iron chains; but here stout rope would do as well, only it would not be so durable. The uprights are let into stone slabs, which are placed about eighteen inches deep in the ground.

Those who are forming a pergola at the present day can have the advantage even of Kew, for they can employ the more recent kinds. I saw no signs of a plant of *Excelsa* or of *Shower of Gold*, two beautiful new ramblers; but I noticed a fast grower had been planted in many cases to cover the tops and chains quickly, and a more moderate



ORNAMENTAL VINES AND ANNUAL ASTERS IN THE WOODLAND.

brick, stone or wood may be all very well for many of the Vines, Clematises, Honeysuckles and similar plants to clamber over or to entwine, but for Roses I prefer the light arrangement alluded to.

I was last year privileged to visit Miss Willmott's delightful garden at Great Warley, and I found myself beneath the Rose pergola there. It is true the Roses were not in full bloom, but the very heavy character of this pergola struck me as being quite unfit for the beautiful Roses that were for the most part above and could only be seen from a distance.

I would suggest that those about to form a pergola for Roses should visit the famous Gardens at Kew, and they will there see more in a few minutes than could be described in a column of writing. But for those readers who cannot go, I will just briefly describe these arches, for they are really a series of arches connected simply by chains, which enables the planter to have quite a grand display that may be seen from any aspect.

The material used for the uprights is gas-piping, and although at Kew it is quite unprotected

grower for clothing the uprights. I think we should always bear in mind the fact of the dearth of bloom among ramblers during the latter part of August and throughout September and October, so that it is wise to introduce as many as possible of the autumnal-flowering varieties. For this purpose such fast growers as *Mme. Alfred Carrière* come in useful, but we are still anxious to receive from raisers some perpetual-flowering ramblers bearing large clusters of bloom. The perpetual-flowering *Crimson Rambler* can be utilised freely, but Roses of the type of *Trier* and *Alister Stella Gray* are only fit for clothing the uprights.

The new variety *Sylvia* will be a welcome addition. *Longworth Rambler* is fine, but it does not ramble and is quite a misnomer; in fact, its correct name is *Deschamps*. For a sheltered part *Climbing Cramoisie Supérieure* would be a grand colour; so that we can make the arches very interesting in the autumn, especially if, as I suggest, some of the free-growing Teas of the *Safrano* and *Marie van Houtte* type are used to clothe the uprights.

SWEET PEA NOTES.

The Floral Committee.—The occasion of the last meeting of the general committee of the National Sweet Pea Society was rendered more than usually important by the fact that it had to elect the floral committee for the current year. It had been decided that nominations of persons from the members of the society should be received by the secretary on or before a specified date prior to the meeting. The object of this was to give all members an opportunity of participating in the election of the most important committee connected with the society. I am in doubt whether the result of that invitation should be accepted as denoting complete confidence in the personnel of last year, or laziness on the part of the members. The returns were few in number, and scarcely any new names were put forward. The depth of knowledge possessed by the several members elected is profound; but whether their decisions will bring unbounded satisfaction to anyone except themselves remains to be proved. The establishment of a floral committee in connection with the National Sweet Pea Society was one of my pet projects a few years ago, and I am told that when the scheme came to fruition I was made chairman, a fact that I had entirely forgotten. I am modest for myself, but I deplore the fact that one's fame does not live.

Catalogues and Orders.—I fail to see why specialists in Sweet Peas issue catalogues in the winter and spring. I am incessantly told that no one can achieve the best results unless the seeds are sown in the autumn, and that all growers now adopt this system. If this is a fact, then the winter and

spring lists represent money devoted purely to the encouragement of printers, and I cannot bring myself to believe that all the Sweet Pea people are so purely philanthropic. My idea is that not one-half of the enthusiasts in Sweet Pea culture give more than a passing thought to autumn sowing, but wait until the winter

catalogues and advertisements come out before they decide what varieties they will grow. It seems to me that vendors have a similar impression, or the catalogues would not be published. Now is the time to order, and when the seeds arrive sow them at once if it is intended to commence in pots, or hold them until March is well in if they are to

someone with enough nerve to recommend certain varieties as of superlative merit in this Special Number of THE GARDEN, I can leave the task alone, and shall then be free to criticise instead of being in the unenviable position of the criticised. A piece of good advice—order immediately from the most reputable sources.

Soil Preparation.—

The headings of the paragraphs preceding this one sound like words, whereas this particular one spells work, and hard work, too. It may not be purposed to do any seeding for another six weeks or even more, or to consider planting out before April has run half its course; but the importance of preparing the soil for either method of culture cannot be disputed. As soon as it is permissible to go on the ground, set to work to finish the operation which was commenced in the autumn, or to carry out all the details now. As far as mechanical work is concerned, one can only urge the cultivator to open up by perfect bastard-trenching the utmost amount of cultivable soil. In some gardens this will mean 1 foot, in another 2 feet, in others 3 feet or even more. The actual depth must obviously depend upon individual conditions, but it may be mentioned that the deeper the ground the better the results will be, provided, of course, that all other conditions are equally favourable.

Manuring the Soil.

—The natural manure utilised should be thoroughly rotted. It ought to be incorporated with the second spit if that is possible, and, if not, let it go between the second and third and the first and second. Do not put a solid layer of manure 1 foot or so in thickness at 12 inches or 15 inches beneath the surface, as is too commonly done by those who think that the sum and substance of manuring

lies in getting as much as possible underneath the plants. In the majority of soils no natural manure is desirable in the top spit, and if any is used it ought to be in the form of refuse material. The mixing in, however, of a little concentrated fertiliser, the basis of which is superphosphate of lime, is almost always wise.

HORACE J. WRIGHT.



SWEET PEA ETTA DYKE, A COMPARATIVELY OLD YET BEAUTIFUL WAVED WHITE VARIETY, GOOD FOR EXHIBITION AND THE GARDEN.

go direct into the quarters in which the succeeding plants are to flower. There are more novelties offered this season, I think, than in any year before, so I do not envy the task of the tyro who has to make a selection of the newest and choicest for himself. His easiest way would be to take the advice of others; and as there will assuredly be

GARDENING FOR BEGINNERS.

CUTTING BACK AND PINCHING SWEET PEAS.

THE coddling of Sweet Pea seedlings invariably leads to disaster. To be quite safe, the young plants should be kept in cold frames where abundant ventilation may be given, by which means a hardy lot of plants may be developed. Those who do not possess cold frame accommodation should make the most

to where there are indications of a more sturdy development of the young plant. Either method is good, although preference should be given to stopping where the plants are unduly weak and unpromising. The effect of such manipulation of the growth is seen in a comparatively short time. New, sturdy and vigorous shoots will develop in the axils of the leaves that are retained on the original stems of the young plants, and these will grow away in a satisfactory manner if the plants are maintained in very cool or cold conditions. The accompanying illustration represents a potful of young plants that were stopped (cut back), and serves to show the vigorous character of the new shoots. Plants from which cuttings of Sweet Peas have been procured develop in much the same way subsequently.

THE EARLY STAKING OF SWEET PEAS.

QUITE early in the life of a Sweet Pea the question of affording young plants the necessary support has to be considered. Some growers are quite content to break up an old or partially-used Birch broom, utilising the many small, spriggy pieces obtainable from this source of supply. Others whose gardens are situated in the country have no difficulty in procuring the feathery little pieces of the Hazel and other trees that abound in most districts. Those growers who are not so fortunately situated, and who possess a good hardy flower border, or, better still, a border devoted exclusively to the Michaelmas Daisies, may provide themselves with staking material of the very best kind. A few of these plants from which the old, seared growths have not yet been removed usually contain a large quantity of spriggy stakes, far more suitable for the purpose under notice than anything else I have seen so far. If it is necessary to dig over the hardy flower border in preparation for the next year's display, the Michaelmas Daisies may be cut down and the more suitable pieces tied up in bundles to be utilised when required. These small stakes should be sharpened to a point, and then inserted between the seedlings for their support, assuming several plants are growing in a 5-inch pot. Individual plants in smaller pots should each receive a stake of a suitable kind. No matter which system of planting be observed—rows or clumps—these stakes are invaluable to both methods. In the

accompanying illustration there is portrayed a clump of six Sweet Pea plants set out well apart at the time of planting, and between the plants branching growths of the Michaelmas Daisies are inserted, to which some of the young plants already show an inclination to turn. D. B. CRANE.

THE TREATMENT OF VIOLETS IN FRAMES.

VIOLETS in frames do not require a high temperature. If the frames are heated by hot-water pipes, the latter must only be warmed in frosty and foggy weather; at all other times the interior of the frames must be kept cool, and the lights taken off in bright, mild weather. If kept too close, the leaves and flower-stems are drawn up weakly and the plants cease to bear flowers very early. Strong runners will grow from the parent plants in February, and if a new plantation is required in the open border, or a stock needed for forcing again next winter, every care must be taken of these early runners. Place a small heap of new soil under each young plant and peg down the runner into it, so that new roots will form and not get disturbed when the cultivator is engaged in gathering the flowers. By the first week in April the young plants will be sufficiently rooted to be removed and transplanted in prepared borders in the open air. Such plants are much more satisfactory than those secured by the splitting-up of the old ones when the latter are cleared out of the frame. SHAMROCK.



SWEET PEA PLANTS WITH THEIR TOPS PINCHED OUT TO INDUCE BUSHY GROWTH.

of an absolutely cold greenhouse, arranging the plants on shelves near to the glass. At this point the question arises as to what should be done with young seedling Sweet Pea plants that have become attenuated and weak through unwise and indifferent culture under glass in their early history. Drastic measures should be adopted with plants that have got into this unsatisfactory condition. Weak, spindling plants, without the power of maintaining themselves in an upright, sturdy manner, should not be tolerated, as they very seldom evolve satisfactorily afterwards, and are often troublesome to deal with when more genial weather prevails. Pinching or stopping should be observed in such cases and in the case of plants to be flowered in pots, as this treatment of the plants has the effect of causing a bushy development, and the rooting process also develops correspondingly. These are facts which anyone who has taken pains to observe would not care to controvert. Let those who doubt what is here stated plant weak, spindling plants that have never been pinched or stopped side by side with those that have been so treated, and long before the flowering season is well advanced convincing proof will be forthcoming of the advantage of pinching or stopping Sweet Peas, especially for garden embellishment and for cut flowers. Generally speaking, pinching is just simply pinching out the point of each young plant, and stopping is to cut back the weaker portion of the growth



SWEET PEAS, WHEN PLANTED OUT, SHOULD HAVE LIGHT SUPPORTS AT ONCE, TO BE FOLLOWED LATER BY THE PERMANENT SUPPORTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Foliage Plants.—Palms, Ficus, Crotons, Dracænas, Pandanus and many others should be carefully sponged with tepid water to which a small quantity of soft soap or an insecticide has been added. Take care not to injure the leaves. Scale is best removed with a small brush.

Potting.—Many of the established plants will need repotting. Always avoid overpotting, and use pots that have been thoroughly cleaned, both inside and out, are well drained and, most important, have the drainage covered with rough material, such as fibrous turf. For warm-house subjects always use material that has been warmed to the temperature of the house. Carefully observe that the new soil is well worked round the old base, and pot firmly or otherwise as the plants require. A general rule to observe is that the finer the roots the firmer the soil needs to be. Never pot with wet soil, but always use it in a moderate condition.

Composts.—These will vary according to the plants in question. Most stove plants require a mixture of peat, excepting Codiaëums, and the latter prefer a compost mainly consisting of loam. Palms and Ferns, too, require the addition of peat. Leaf-mould should be mixed according to the nature of the loam, but usually about half the quantity of the former to the latter. Add sufficient sand to make all porous.

Watering.—This requires careful consideration with newly-potted plants, and sufficient space should always be left in the pot for filling up with water. Newly-potted plants are best soaked in after potting; that is, thoroughly well watered, and then allowed to dry sufficiently before being watered again. Do not be tempted to water a plant merely by the appearance of the soil on the top of the pot, but rap the side of it, or with small pots just lift them up. Always use water with the chill taken off. Most newly-potted plants in warm positions in houses or pits will be greatly assisted by judicious damping down of the surroundings and light sprayings overhead when the weather permits.

Melons.—To be successful with the culture of early batches, sufficient fire-heat must be employed to maintain a temperature of at least 60°. Sow the seeds singly in small pots in a loamy compost and plunge in a hot-bed. As soon as the seeds have germinated, elevate them to the glass. In the meantime prepare the bed, and unless plenty of piping exists underneath, make a hot-bed first of long strawy manure and leaves. Good loam, made quite firm, and the addition of a sprinkling of bone-meal, soot, lime-rubble and a little good artificial fruit fertiliser will suit admirably. Allow the rank heat to escape from the materials before building the bed, and let the whole sink to its normal level before planting.

Cucumbers.—These require raising in a similar manner to Melons. When germinated, give the young plants the maximum amount of light and water carefully. Stake the plants as soon as needed.

Sowing Seeds.—Sow now in a gentle heat seeds of Streptocarpus, Pentstemon, Gloxinias, Begonias, Grevillea, Cyperus, Asparagus Sprengeri and similar plants, also a little Lettuce, Parsley, Cauliflower, Celery and Vegetable Marrow for early supplies.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Sweet Peas.—It is now quite time to sow in pots singly the number of seeds required to fill rows or clumps. Soak the soil an hour or two previous to putting in the seeds, and cover with something that will exclude mice, placing the pots in a warm structure till germination is effected; then keep quite cool.

Preparing the Ground.—This is best done in autumn, but may be effected now, only the soil must not be wet, and, as trenching proceeds, firm the soil sufficiently that no part of it be loose when completed. A sprinkling of pigeon-manure and soot applied to the surface is advantageous, but chemical manures are now, I think, best left out.

Primula obconica.—To produce very strong floriferous plants to bloom early, seeds may now be sown and germinated in a hot-house. There are many distinct and pretty shades of rose, pink and lilac to be had with large blooms. They are, indeed, indispensable for autumn and winter use, but they ask for a long season of growth.

Winter-flowering Carnations.—A goodly batch of cuttings should be secured without delay. They root freely in ten days to three weeks when inserted in wet sand and kept wet till rooted, with a not too strong bottom-heat. Till roots are produced there is no top growth; consequently there is no danger of the little plants being softened, provided they are not left too long in the cutting-box after rooting.

Begonia Gloire de Lorraine.—As these become exhausted with flowering, give less water at the roots, and after a week or two trim off the old stems, in order that new shoots may be formed for propagating purposes. Healthy leaves with the stalks attached may be used for propagating, inserting them singly in 2-inch pots in a sandy compost and keeping the pots plunged in a hot-bed till growth commences.

Gloxinias.—Sow seeds in a strong heat to produce plants for late summer flowering. Old tubers should be shaken clear of soil and repotted in fresh material, keeping the top of the tubers level with the surface. A moderate stove temperature is suitable, and scarcely any water should be given till after growth commences.

Apple Pruning.—Where the trees were partially pruned in August, the present work will consist in completing what was then left. Established trees are certain to have many spurs much too large to bear freely, and these should be thinned sufficiently to permit of those left plumping their buds. Keep an eye on cankered spots, and cut them quite into the healthy wood.

Apricots.—These would be much more satisfactory in the North were the trees treated more like Peaches, with few spurs and the shoots widely disposed. It is now time to prune and nail the trees.

Surface Dressing.—This requires not a little judgment, for trees may appear to be quite robust, yet barren, the cure for which would be a surfacing of manure, and in other instances a different treatment might be needed. In the case of old trees on grass especially, an occasional supply of rotted manure to induce wood growth is very beneficial.

Tynninghame, Prestonkirk, N.B.

R. P. BROTHERSTON.

THE TOWN GARDEN.

Ranunculuses and Anemones.—The flowers from roots planted now would succeed those from roots planted during last October. These plants do well in a light and fairly dry soil and near a wall, where probably some readers have had a difficulty in getting other kinds of plants to grow. Thoroughly break up the soil and put in the roots in rows 15 inches apart, and 6 inches asunder in the rows, or in clumps, five, seven or nine in each, and 5 inches apart. Plant 2 inches deep.

Broken Walls.—Owing to constant nailing of fruit trees or the shoots of climbers, many walls become fit hiding-places for insect pests, owing to the numerous holes in them made by the nails. The present is a good time for the work of pointing to be done—the filling up of all holes with either cement or the best grey lime. Before the holes are closed, however, a strong solution of some insecticide must be made and forcibly syringed into them.

Planting Box Edgings.—In old gardens there is no kind of edging to paths that looks better than Box, though it makes a refuge for slugs and other garden pests. Procure some nice bushy pieces possessing plenty of fibrous roots, and divide the clumps into parts, all being, as nearly as possible, equal in size. Cut off any long, fibreless roots. Lay down a garden line, make a trench 4 inches deep with one perpendicular side, and lay the young plants against this side so that they also touch each other. Put in first some fine loam around the roots and make it firm, then fill in the trench. The pruning or clipping must be done a few weeks later.

Crocuses.—Owing to the mild weather during the early part of the winter, bulbs in borders made considerable growth, and Crocuses especially are forward. In all cases care must be taken to prevent sparrows eating the flowers. The birds are very fond of these blossoms and will soon destroy great numbers while in the bud stage by pecking off the tops and making holes in the sides; then the flowers, when fully open, are ragged in appearance and quite spoiled. A few strands of black thread fastened to pegs so as to come just above the flowers will keep away the birds.

Rose Cuttings.—When Rose cuttings are put in during the autumn months, a callus forms at their base early in the New Year. Young roots grow from the callus and make much progress in the spring. Now, if any cuttings are found to be loose in the soil, they must be made firm again by treading, as if neglected in this respect they will probably die.

Vines on Outside Walls.—In some parts of the country, especially in the Southern Counties, Vines are grown on outside walls, trained over pergolas and arbours. The only work needed to be done now is to finish the pruning of the branches forthwith, as late pruning would result in the loss of much sap when it rises rapidly in April. Furthermore, a substantial top-dressing of pure fibrous loam, after the careful removal of the top loose soil, will be highly beneficial.

The Garden Frame.—A few seeds of Lettuces may be sown in boxes now and placed in the frame. Roots of Mint, lifted and similarly placed, will grow freely and be ready for use a month earlier than the open border plants. Roots of Lobelia cardinalis should be examined and divided carefully, then plant the parts in a sandy mixture in a box.

TOWN GARDENER.

THE BEST VARIETIES OF SWEET PEAS FOR EXHIBITION.

No.	Name.	Colour.	Alternative Varieties.	Remarks.
1	Mrs. C. W. Breadmore	Cream, red edge	<i>Evelyn Hemus</i>	
2	Elsie Herbert ..	White, red edge	<i>Dainty Spencer</i>	
3	John Ingman ..	Carmine	<i>George Herbert, Paradise Carmine</i> ..	
4	Selected King..	Crimson	<i>Maud Holmes, Sunproof Crimson</i> ..	The two alternative varieties are better than most stocks of King Edward VII. Spencer.
5	Hercules	Pink	Countess Spencer, Enchantress, Paradise	
6	Nubian	Maroon	Tom Bolton	
7	Helen Grosvenor	Orange pink ..	<i>Anglian Orange, Edrom Beauty, Helen Lewis</i>	This colour generally requires shading.
8	Mrs. Routzahn..	Pale cream pink	<i>Mrs. Hugh Dickson, Gladys Burt</i> ..	Some stocks of Mrs. Routzahn are unfixed.
9	Queen of Norway	Mauve	Tennant Spencer, Empress	
10	Nora Unwin ..	White	<i>Etta Duke, Freda, Paradise White Pearl</i>	It is difficult to say which is the best white variety.
11	Florence Nightingale	Lavender	<i>Asta Ohn, Mrs. Charles Foster, Masterpiece, Paradise Lavender, Nettie Jenkins</i>	It is difficult to say which is the best lavender variety.
12	Earl Spencer ..	Salmon	Nancy Perkin, <i>Stirling Stent</i>	This colour is always poor in growth and requires shading.
13	Clara Curtis ..	Cream	Paradise Ivory, Isobel Malcolm ..	
14	Mrs. W. J. Unwin	White, red stripes	<i>America Spencer, Aurora Spencer</i> ..	Mrs. Unwin is a better flower than America Spencer, but is not so good in growth.
15	Thomas Stevenson	Orange scarlet ..	<i>Edna Unwin, Dazzler</i>	Only moderately good growers and require shading.
16	Doris Usher ..	Cream pink ..	<i>Mrs. R. Hallam, Constance Oliver</i> ..	
17	Elfrida Pearson	Pale pink	Princess Victoria, Mrs. Hardcastle Sykes	
18	Arthur Unwin ..	Rose and cream	Mrs. Andrew Ireland	
19	Scarlet Monarch	Scarlet.. .. .	<i>George Stark, Premier, Doris Burt</i> ..	It is not easy to exhibit this colour well.
20	Flora Norton ..	Pale blue	<i>Anglian Blue, Zephyr</i>	„
21	Mrs. Townsend..	White, shaded blue		
22	Charles Foster..	Pink, mauve shades		Good, but difficult to exhibit
23	Marie Corelli ..	Rose	<i>Marjorie Willis</i>	
24	Queen of Spain Spencer	Pink		Very beautiful, but small flower and weak grower.

In the above list the first twelve varieties form an excellent all-round selection for those who require that number. Those who require eighteen varieties should choose the first eighteen in the list. Of course, in such a matter as the selection of varieties, opinions will greatly differ, and some growers would include in their first eighteen varieties which I have placed lower in the list. Comparatively few growers will require more than eighteen varieties; but, on the other hand, those who desire to exhibit only twelve are advised to grow at least three spare varieties. The varieties shown in the column of alternatives are nearly all too much like the varieties chosen to be included in the same collection. The varieties in this column printed in italics are practically as good as the sorts selected, and are possibly preferred by some growers. Only those varieties have been included which have been a year or more on the market and have proved their merits. They are all nearly or quite fixed.

New Varieties.—The following novelties for 1912 are expected to supersede Nos. 10, 11, 12, 19 and 23 respectively; White Queen, R. F. Felton, Barbara, Red Star or Scarlet Emperor, and Rosabelle. Melba is another serious rival to Earl Spencer. The following novelties will probably prove at least as good as Nos. 6, 14, 18 and 21 respectively: King Manoel, May Campbell, Mrs. Cuthbertson and Marjorie Hemus. The following novelties for 1912 are distinct from any tabulated, and are most promising. Each may prove worthy of inclusion, even in a collection of only a dozen varieties: W. P. Wright (very pale blue), Edith Taylor (cerise pink), Prince George (mauve and lilac tints), and Afterglow (purple and mauve tints). The last two varieties, and also Dorothy, another promising novelty, will possibly be found to require special cultivation to bring out their undoubted merits. Loyalty, Mauve Queen, Paradise Coccinea, Juliet, Iris, Winifred Unwin, Mrs. Warren and Bertha Massey are other noteworthy novelties. The following are superior to any other pink varieties, but are unfixed, and

probably unfixable: Audrey Crier, Olive Ruffell, Marjorie Linzee and Syeira Lee. Anglian Pink and Miriam Beaver are practically identical with the last-named, and Olive Bolton with the third named variety. Mrs. George Charles, Menie Christie and W. R. Beaver or Senator Spencer are quite distinct from any varieties named, but are hardly beautiful in colour, although sometimes grown for exhibition.

Varieties for the Garden.—So far the selection of varieties has been made from the point of view of the exhibitor, but, except where otherwise stated, all the varieties tabulated are good growers, and are otherwise suitable for garden decoration. For a selection of twelve varieties for the latter purpose the following might be chosen: Maud Holmes, Nettie Jenkins, Mrs. Hugh Dickson, John Ingman, Elfrida Pearson, Mrs. Breadmore, Elsie Herbert, Nora Unwin, Constance Oliver, Queen of Norway, Clara Curtis and Nubian. Where twenty varieties are required, the following might be added: Arthur Unwin, Hercules, America Spencer, Marie Corelli, Flora Norton Spencer, Helen Grosvenor, Mrs. Townsend and Scarlet Monarch. In conclusion, I should like to point out that it is as important to grow good stocks as to grow good varieties.

Woodford, Essex.

G. F. DRAYSON.

NEW AND RARE PLANTS.

THERE were no awards made to new plants by the floral committee of the Royal Horticultural Society at the meeting held on January 23. The following awards, however, were made by the Orchid committee:

FIRST-CLASS CERTIFICATE.

Cypripedium Norah.—A bold, handsome flower of excellent form. The dorsal is very broad and well developed, deep purple maroon over a white ground. Petals soft yellow with bronze maroon markings. The lip is of a similar hue. Parentage—

Cypripedium M. de Curte x C. aureum Œdippe. Shown by Lieutenant-Colonel Sir George Holford.

AWARDS OF MERIT.

Zygocolax Charlesworthii Cobb's Variety.—This variety has larger flowers and is better coloured than the type. The flowers are heavily spotted chocolate, and the lip splashed deep violet-purple. Shown by Walter Cobb, Esq., Horsham.

Cypripedium Duke of Marlborough.—A fine, bold flower with hooded dorsal. Both petals and pouch are brownish green. The dorsal is spotted deep purple on a white ground, green base. Shown by His Grace the Duke of Marlborough.

Zygopetalum Mackayii Charlesworthii.—A distinct and very much improved variety of the well-known species Z. Mackayii. The variety is of vigorous growth, and carried a spike over two feet in length. The lip is pure white and the perianth pale green.

Lælio-Cattleya Amabile.—A lovely variety of good form and colour. The petals are white, broad and slightly waved. The lip is well developed, purple with a deep white margin. These two were shown by Messrs. Charlesworth and Co., Hayward's Heath.

Cymbidium Schlegelii.—An attractive hybrid. The flowers are spotted red over a creamy white ground. The lip is more heavily spotted with golden brown and fringed pink. Parentage: Cymbidium wiganianum x C. insigne. Shown by Messrs. J. and A. McBean, Cooksbridge.

THE NAMING OF SWEET PEAS.

I AM disposed to think that those who raise or introduce new Sweet Peas might exercise a little more pains and care in the naming of them than is now the case in some instances; and when the Editor asked me to write something for the Sweet Pea Number of THE GARDEN, it gave me a welcome opportunity of pleading for this to be done. As an instance of what I mean, I think that perhaps among this season's novelties that fine variety Barbara has taken my fancy more than any other; but why not a more distinctive name? The particular Barbara after whom it was named may be, and no doubt is, for all I know, a very charming and accomplished young lady; but the name Barbara alone conveys nothing to "the man in the street."

I wonder when people will begin to realise that a well-chosen and applicable name is of considerable commercial assistance to the Sweet Pea, as, indeed, to all flowers. I remember a talk I once had with a very eminent hybridist, complaining bitterly of the ugly name that had been given to a plant purchased from him. "Why," he exclaimed, "I wouldn't buy a flower with such a name!" and it may astonish some of your readers to know that the British public has, after all, an innate sense of the "fitness of things," and that a good name is often of distinct assistance to a flower in the commercial sense.

Take a name like Afterglow. Here is a plant excellently and appropriately named, the name conveying to us the colour character of the flower. On the other hand, the constant and monotonous practice of naming Sweet Peas after individuals more or less well known may be a compliment to the individual in question, but is infrequently one to a good Sweet Pea. If, however, this has got to be done, in the name of good taste pray let

it be done with judgment, *i.e.*, do not give the male friend you wish to honour a daintily and delicately coloured flower, nor to the lady a bold and brilliant one. "Give a dog a bad name and you may as well hang him" is perhaps a rather strongly-worded adage, but it applies to Sweet Peas with rather more force than the ordinary observer realises. F. HERBERT CHAPMAN.

THE FRUIT GARDEN.

HOW TO GROW GOOD MELONS.

DURING the last few years the Melon has become much more popular than it used to be. This is no doubt due to the many different ways it is served at table, both as a sweet and dessert fruit. Last year was an ideal one for the culture of Melons, and I do not remember the flavour of the fruits being so consistently good as was the case during the whole of the season. In such a season the frame culture of Melons might successfully be practised by anyone possessing a cold frame; but such seasons are very rarely experienced in this country, and to grow fruits of the highest quality it is necessary to have artificially-heated houses or pits.

Sowing the Seeds.—We sow our first batch during the last week of the year. From this sowing we cut the first ripe fruits from the middle to the end of April. Successional batches are sown at monthly intervals up till the beginning of July. This last sowing supplies ripe fruits till the end of October.

The Best Soil.—The soil we find most suitable for the Melon is rich fibrous loam, with a good sprinkling of old mortar rubble. The bed is made with whole turves, except the centre, for which chopped turves are used for the convenience of planting. It is most important to build the bed quite close to the roof glass, so that the plants do not become drawn and weak. Their fruiting season will be also very much accelerated by so doing. Our plants are grown with one single stem, and no effort is made to fertilise the flowers till there are three or four open on each plant. In this way we obtain an even set of fruit over the whole house. All lateral growth must be kept pinched out after the fruits have set.

Manuring.—We never find it necessary to apply stimulants of any kind till the fruits are freely swelling, when a little liquid cow-manure, alternated with a light sprinkling of Le Fruitier, is given. During the final stages of growth, cow-manure is given with increased strength. The minimum temperature should be kept above 65° if possible. During bright, sunny weather it may rise to 85° or 90°, so long as there is a little air at the top of the house. The house should be closed quite early in the afternoon, after spraying the plants and charging the house with moisture. The plants revel in such an atmosphere. It is a difficult matter to say which are the best varieties, but the one which finds most favour at the Royal table is Veitch's Eminence, and it is the best-flavoured Melon I know. It belongs to the pale-fleshed section. Its constitution is very robust and it is a free setter. Of the green-fleshed kinds Shamrock may be thoroughly relied upon, and Scarlet Queen is undoubtedly one of the very best scarlet-fleshed kinds.

Royal Gardens, Frogmore.

E. HARRISS.

[Our illustration represents an exhibit of a new Melon known as The Manchester Melon. This

exhibit was staged at the National Vegetable Society's show on August 30 last year by Messrs. Dickson and Robinson of Manchester, and fruits tested by the judges on that occasion were considered of excellent quality. It is a red-fleshed variety, with a beautifully-netted skin.—Ed.]

SWEET PEAS IN THE NORTHERN COUNTIES.

SITUATED in a somewhat isolated position in the North-West of Lancashire, it will doubtless interest many readers, more particularly those in the South and Midlands, to know that in the North Lonsdale district, of which Ulverston is the centre, there exists a large and keen body of Sweet Pea growers, and I venture to say that nowhere in the rural portion of England (having regard to area and population) can there be found a more earnest, up-to-date and enthusiastic body of gardeners, both amateur and professional.

This go-ahead spirit in growing Sweet Peas is due, in a large measure, to the encouragement given to growers by the North Lonsdale Rose Society, who this year are catering for Sweet

according to the nature of the land. Here we are favoured with good land, plenty of soil and a pure atmosphere. We do not always enjoy the balmy breezes of the South, as growers know that even in May we may expect frosts, and consequently we know the value of thoroughly hardening the plants before putting them out in April.

Among local growers I find that practically all the grandiflora varieties have been discarded, and up-to-date waved varieties are greatly in evidence; and the keenest of friendly rivalry exists between growers as to who shall turn out the best flowers at the local shows.

The intensive culture system has also been taken up by some of the leading growers; but although greatly advocated by many of the Southern "stars" in the Sweet Pea world, I do not think that it will become popular with us in the North, as, quite independently of the time that such a system takes, the few fine flowers produced are not ample return for the great sacrifice of bloom which such a system entails. As many of the local growers, particularly gentlemen's gardeners, have to grow for garden decoration as well as for exhibition, with them the intensive culture system is not a success, on account of the bareness produced on the lower portion of the plants.



THE MANCHESTER MELON, A NEW RED-FLESHED VARIETY OF EXCELLENT FLAVOUR.

Peas more than ever. At the society's next annual show (which is its twenty-ninth), to be held in July, the classes for Sweet Peas will constitute a record, and, I think, will be equalled by no other provincial society in Britain. For Sweet Peas alone three silver trophies, four gold and five silver medals, and one bronze medal are offered, in addition to over sixty pounds in cash. Since the formation of the National Sweet Pea Society, this locality has done its share in spreading the Sweet Pea cult, and our local society was the first to be honoured with the provincial show of the National Sweet Pea Society.

As I stated at the society's annual meeting in London, no more fitting district could be suggested for the Northern trials of the society, as it can offer the best of land, the purest of air, and is easy of access for both Scottish and Irish growers, to say nothing of the huge body of Sweet Pea enthusiasts in Yorkshire and Lancashire. I am sanguine enough to hope that these trials will be held in this locality in 1913, if the feeling of the annual meeting referred to is any criterion.

I do not propose to go into the details of cultivation, as this has been described in your columns over and over again, and is much the same throughout the country, differing, of course,

I find that throughout the district the system is adopted of raising all seeds in pots towards the end of January or early in February, and all plants are out in their permanent quarters by the middle of April. There is quite a keen demand for novelties every year, and very few gardens will be found in this locality where several of the newest varieties cannot be found. In my own case, as an amateur exhibitor, in addition to growing large quantities of twenty-five standard varieties I am this year growing at least thirty of the 1912 productions; and I find from the great number of gardening friends who visit me during the flowering season that these novelties are not only a source of pleasure, but act as an education and an impetus to the enthusiasm of other growers.

In conclusion, I may say that want of time and the value of space prevent any further elaboration of this article; but, as secretary, I would extend a hearty welcome to growers from all parts of the country to visit the North Lonsdale Society's exhibition in 1912, more particularly as exhibitors. They will then be able to judge for themselves the high standard of cultivation in Sweet Peas which prevails throughout this Northern district, and which, I venture to say, would do credit to many shows held in much larger centres.

Ulverston.

F. J. HARRISON.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR of THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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NOTES OF THE WEEK.

A Useful Speedwell in Winter.—The Cypress-like Speedwell, *Veronica cupressoides*, is one of the most attractive of the shrubby Veronics for the rock garden, and it is specially valuable during the winter months. At that time the value of the low-growing evergreen shrubs is always recognised, and especially those of a class like *V. cupressoides*. It is probably as frequently met with as *V. salicornioides* as under its correct name—that given above—but there can be no doubt of the proper one. It is a dense, freely-branched bush, slow in growth, and lasting for years in a dwarf state. Plants of about six inches high may frequently be met with which have grown little for a number of years. The flowers are violet, but the plant is shy of blooming. The dwarfiest variety is called *V. c. variabilis*.

The Alpine House at Kew.—For many years past this has been one of the most popular features of the Royal Botanic Gardens throughout spring, for whenever it is visited many choice and interesting plants are to be found in flower. As it is unheated, hardy subjects only are on view; but it is the means of exhibiting many flowers at their best which would probably be injured by inclement weather out of doors. Although it cannot be expected to be at its best for several weeks to come, it is already assuming a gay appearance, and among other plants the following were noted in flower on the occasion of a recent visit: *Crocus Sieberi*, *C. chrysanthus*, *C. alatavicus*, *C. Fleischeri*, *Cyclamen ibericum*, *C. Coum*, *Ornithogalum Haussknechtii*, *Narcissus bulbocodium monophyllus*, *I. reticulata histrioides*, *I. Danfordiae*, *I. Tauri*, *I. alata*, *Adonis amurensis*, *Eranthis cilicica*, *Saxifraga Grisebachii*, *S. burseriana grandiflora* and *Merendera caucasica*.

A Winter-flowering Greenhouse Plant.—At one time the various species of *Chorizema* were among the most popular of winter and early spring flowering greenhouse plants, but, unfortunately, they are somewhat of a rarity in the present day. They are, however, well worthy of reintroduction to those gardens where their culture has lapsed, for, in addition to bearing very showy flowers, they last in good condition for several weeks. *C. ilicifolium* is one of the most floriferous and easily grown. It may be rooted from cuttings inserted in sandy peat in a close frame during early summer. The young plants ought not to be allowed to flower the first winter, but be kept well cut back in order to obtain a good foundation. In most instances nice serviceable plants in 4-inch pots will be available for the following winter, but the succeeding year plants 2 feet to 3 feet high, with many branches, may be obtained. The Pea-shaped flowers are orange and red in colour, and

they are borne in racemes from the lower parts to the points of the branches.

Pernettya mucronata.—The virtues of this ericaceous shrub do not appear to be so generally appreciated as they ought to be, for there are few shrubs which are so worthy of being planted as this one, for three distinct features. First, it is a neat evergreen with small leaves and comparatively low growth; secondly, its small, white, bell-shaped flowers are very pretty in May; and, thirdly, its bright-coloured fruits are very attractive during autumn and winter. It is a native of the Magellanic region, and grows 1½ feet to 2½ feet high, spreading by means of suckers. Under cultivation a good deal of variation occurs in the colour of the fruits, and a number of the most distinct have been selected and propagated by nurserymen.

Carpeting Bulbs in Pots.—A considerable improvement is accomplished in the appearance of Hyacinths and other bulbs grown in pots if the surface of the soil is carpeted with some dwarf plant, the fresh colouring of the carpet being much prettier than that of the bare earth. Some of the Selaginellas have been employed for the purpose, that useful variety, *S. denticulata*, being one of the best and most easily cultivated. The Selaginellas may be grown in other pots and planted in those containing the Hyacinths when the latter are taken indoors for blooming. Another good plant for the purpose is the common *Oxalis* of our woods, which is a most pleasing room plant and is excellent for carpeting such bulbous plants as are grown in pots. *Arenaria balearica* is sometimes met with as a carpenter.

A Disease of Sweet Peas, Asters and Other Plants.—Under this heading Mr. G. Massee in the last issue of the *Kew Bulletin*, deals with the disease that has become so closely associated with the Sweet Pea in recent years. Apparently the disease, *Thielavia basicola*, does not limit its attentions to the Sweet Pea, but will also attack Asters, Orchids and various other cultivated plants, more especially during the seedling stage. So far as the Sweet Pea is concerned, it is well known how very conflicting and confusing are the opinions of expert growers, a fact that was fully borne out in a recent conference held under the auspices of the National Sweet Pea Society. Mr. Massee states that it is practically impossible to cure a plant once it is attacked, and that the infection of a new area is in the majority of instances due to the use of manure, on which material the fungus flourishes and reproduces itself at a rapid rate. Commercial formalin (= 4 per cent. formaldehyde) is recommended as a most effective fungicide for sterilising infected soil. When green manure is dug into land intended for seed-beds, it is advised that it should previously be thoroughly watered with formalin as above.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Calceolaria fuchsiae-folia for Winter Use.—I used to know this pretty Calceolaria by this name, but it is now, I am told, called *C. deflexa*. It is a good bloomer for the greenhouse during winter, as, with the common temperature afforded in such a structure, it bears its blooms freely during all the winter months. It has dropped, to some extent, out of cultivation, but I saw some nice plants of it the other day, and these have prompted this note.—A. M. D.

Hamamelis mollis.—My experience this season of this charming shrub is much the same as that of Mr. Beckett, as mentioned on page 46 of the issue for January 27, although the specimens here are much smaller than his, being about three feet high and two feet through. They were planted three years ago, and flowered last season for the first time; they were then in flower before Christmas. This season they are, at the time of writing (January 31), only just commencing to bloom, although the plants are well set with flower-buds. *Hamamelis arborea* is much earlier; it was in full bloom before Christmas, and so far appears to be much freer than *H. mollis*.—A. GRANT, *New Place Gardens, Haslemere*.

Fixed Stocks of Sweet Peas.—I was very pleased to see one of the writers in your Sweet Pea Number, dated February 3, refer to the necessity of Sweet Pea growers getting the best stocks of Sweet Peas and not letting them deteriorate, and also to get them true. There is nothing more annoying than to give a big price for a novelty, and when you have put yourself to a lot of trouble to grow it to find you have got a mixture, with a sprinkling in it of the variety you wished to purchase. I well remember purchasing *Miriam Beaver* when it was first introduced, and when I put the blooms up for show I found that everyone else had a different shade of *Miriam Beaver* to mine; in fact, I found out later that I had only one true plant out of the packet. Some firms are much more careful that their stocks are true than others, and they are the firms to patronise. My opinion is that the grandiflora or plain hooded type is doomed unless there is something exceptional in colour to recommend it, but for beauty and grace the waved varieties are unbeatable.—H. H. KNIGHT, *Secmaton, Dawlish*.

The Improvement of Sweet Peas.—I am constrained again to take up my pen—I had almost said cudgel—to deal, with your kind permission, with a point raised by Professor Biffen in his article under the above heading in your issue for February 3. He says: "We still lack Spencer forms of the Bush and Cupid types. To raise them is the merest child's play. All that is necessary is to cross. . . . These Spencer Cupids possess all the bad features of the old type. The Bush types, too, still require support, and are worthy counterparts of the old type." If we still lack Bush and Cupid Spencers, how can it be said that "these Spencer Cupids possess all the bad features," &c.? May I point out that in my dwarfs I have obtained Spencer forms which, unlike the Cupids, do not shed their buds, nor, unlike the Bush varieties, really are dwarf. To produce them, however, was not the "merest child's play." If it had been, others whose operations may, perhaps, fittingly be so described would have raised them

before now. But I will merely say that I did not cross anything with any Bush or Cupid variety.—HILDA HEMUS.

The Paris Wallflower.—I was pleased to note the reference to Parisian Wallflowers on page 31 of THE GARDEN for January 20. I am quite in favour of the same, and wonder it is not more used in English gardens. Although not commonly grown around here, so far as I have seen, I had no idea of its scanty reception in our country generally. I have grown it on and off for years, and have had, and still have this season, plants of this variety blooming freely and cheering the dark, dull days with their bright, fragrant blossoms.—STEPHEN STOOT, *The Gardens, Comprigney, Truro*.

The Winter Jasmine.—I have never seen *Jasminum nudiflorum* flower more freely than it has during the present winter, and it has had the most beautiful effect in positions where the plants have been neglected as regards pruning. I refer to shrubberies and old buildings, where I have seen plants growing almost in a wild state. In some instances the branches have become mixed with those of evergreens, and the effect is charming. No doubt the heat of last year ripened the wood well, and the mild weather and general moist atmosphere have been favourable to the free bursting of the flower-buds. To me the yellow of the flowers has never seemed as rich before.—B.

The Crocus.—In the "Song of Solomon" the Crocus is called the Saffron, Spikenard and Saffron, Calamus and Cinnamon, with all trees of Frankincense, and its colour is indeed truly described in the word, its wonderful saffron shining in the glory of the February sun. It is said there is no other colour like it in Nature, save only the early tints of the dawn. Homer has sung of the morning as "saffron-robed," and an old Persian poet wrote:

And night grew grey, and feared the desertion
(The desertion of her love, the starry heavens),
So she dipped her hair into saffron.

And because only the dawn can equal it in beauty, the Crocus is proud indeed.

Hail, many-colour'd messenger, that ne'er
Dost disobey the wife of Jupiter;
Who with thy saffron wings, upon my flowers
Diffusest honey-drops, refreshing showers.

—SHAKESPEARE.

—WILLIAM KITLEY.

The Modern Sweet Pea.—It was with the greatest interest I read your paper dated February 3, devoted as it was to my once favourite flower, and at last discovered therein the long-sought names of the men to whom we owe the deplorable destruction of the original type of that once beloved blossom, now, alas! long robbed of its true form and fragrance. With many another amateur I have privately lamented the loss of the Sweet Pea as we knew and loved it some thirty years ago, and heartily despise that deformed and too often scentless flower that now bears its name. While willingly admitting the great improvements in size and in variety of hues, we mourn the trim and dainty shape of the old Sweet Peas with their delicious and powerful perfume. Cannot some clever modern florist restore to us the sweet and shapely blossom of bygone days, with the addition of the admittedly charming colourings of the flower which now bears the misnomer of "Sweet" Pea? With what delight it would be welcomed! How strange it seems that, just as the beloved Elia owned he had "no ear," even so many modern florists seem to have "no noses." For it is not only the (once Sweet) Peas that have

suffered loss, but many a much-vaunted modern Rose is open to the same reproach.—AN AMATEUR.

A Plague of Slugs.—I am a jobbing-gardener in Brockenhurst. At one place I go to I work three days a week. When the people engaged me, they said they could get nothing to grow. When I commenced work, twelve months last June, I soon found out the cause of it—the ground was overrun with slugs. I at once started laying down Cabbage leaves, but I found I could not catch many slugs in the summer months; but as soon as winter came I found that I could catch as many as six or seven hundred a day. One day last February I caught over nine hundred. Up to the time of writing I have caught 18,700 slugs in this way in less than two years. I have been told that slugs go underground in the winter. They are no more underground in the winter than in the summer—that is, if they can find shelter under Cabbage leaves—unless it is in frosty weather. As the Cabbage leaves decay I take them up and lay down fresh ones, not only in one place, but in different places over the garden, and look them over about three times a week. I always pick up and destroy the eggs of slugs.—C. PLACE.

The Auricula.—I was interested in "F. R.'s" remarks on the above plant, and suggest the following as accountable for its comparative rarity in ordinary well-stocked gardens: Polyanthuses and garden Primroses have made such headway with the public during the last few years that I think it possible they take the place, with many people, of the Auricula. Roughly speaking, I should think the growers of Polyanthuses and Primroses are as ten to one of Auriculas, added to which the former are far more floriferous and, on the whole, easier to manage, though they lack those exquisite velvety markings so grandly seen in the Auricula. Regarding keeping them in winter, we, being on cold soil, have always found it best to take them up and box them. We have kept them in excellent condition by heeling them in boxes and keeping the latter in perfectly-open sheds, only covering with a mat or bag on frosty nights. They needed an occasional watering owing to such airy conditions, and we chose mild, bright mornings to apply it.—C. TURNER, 1, *Castle Terrace, Muswell Hill, N.*

An Error in Sowing Small Seeds.—The plan generally adopted for sowing small seeds is, to my mind, wrong. First of all, the receptacle is filled with soil, which is made firm and the surface pressed flat. The seeds are then sown, followed by a light sifting of soil, which is again pressed and the whole surface made firm. The seeds in due course are watered by a rosed-can or dipped. The surface in many cases afterwards becomes slightly dry. It is then that the soil which was pressed down over the seeds forms quite a hard crust, and after the germination of the seeds has taken place, the small seedlings fail to push through the crusty surface. The method which I practise—and always with the best results—is as follows: Fill up the pots, pans or boxes with soil, smooth the surface, but do not press it, sow the seeds, after which press them firmly into the soil; then sift a little soil over them and the operation is completed. The pressing of the seeds into the soil secures them in the first place, and with anything like ordinary care there is no fear of the seeds being washed out when being watered. The soil sifted on the top of the seeds and allowed to remain quite loose does not frustrate the growth of the small seedlings.—A. ALLARDICE.

Protecting Trees from Hares.—I noted in your issue for January 20, page 30, "C. R. L." asking if anyone knew of any method to prevent hares from eating fruit trees, Roses and other plants. I have been troubled in the same way with them, but have found that Renardine, supplied by Gilbertson and Page, Limited, Hertfordshire, at 3s. per quart, will keep hares, rabbits or even foxes away if string is steeped in it and run round any plants likely to be attacked. Instructions for use are on the tins.—C. S.

Improving Gravel Paths.—At this period of the year a deal of attention is usually directed towards the garden walks. A method of improving them we have occasionally practised is to prick up the paths with a strong pronged fork. The surface is then left loose for a time in order that rain can clean the gravel previous to re-rolling firm again. Of course, the paths are further improved in appearance if the slightest sprinkling of fresh gravel is incorporated with the old before being rolled down. The effect of forking up only is really surprising, and I strongly recommend this simple expedient to anyone whose walks are looking shabby or dirty yet are not really in need of re-gravelling.—C. T.

Eucharis amazonica.—I am sending you a photograph of a pot of Eucharis Lilies. The species, I believe, is Eucharis grandiflora, generally called E. Amazonica. The bulbs were brought home by Mrs. John Biddulph from Trinidad in March, 1903. I am not quite sure what treatment they received previous to five years ago. Since then they have been grown in a temperature of 55° during the night, rising during the daytime by 5° or 10°, according to the amount of sunshine. They have not been disturbed at the root more than was necessary in attending to the drainage, and have been given an occasional top-dressing, with a compost of loam, a little leaf-soil and silver sand. They are given occasionally some weak cow-manure-water and soot-water alternately. You will notice that all the flowers are not fully out, but the plant has thrown up six good spikes, each with five blooms, and now that they are fully developed the plant is quite a picture. We generally get two lots of flower a year from them—at Easter and again now.—EDWARD MONTAGUE, *The Gardens, Grey Court, Ham, Surrey.*

Grafting and Fruit Trees.—Two notes in the issue of THE GARDEN for January 27 excite my curiosity. The first was on the origin of a Pear, called Backhouse Beurré, which, we are told, on the authority of Messrs. Backhouse and Sons, York, "was the product of a graft of Beurré Diel upon a Jargonelle." Are we to understand that this Pear is what is known as a graft hybrid, and, if so, what proof is there of this? May it not have been a bud sport? The second note is on "Depth to Plant Fruit Trees," in which it is more than suggested that grafted trees do better when they are planted deep enough to enable the scion to root "on its own." If there is anything in this, what chance have standard grafted trees? Surely there are hundreds of proofs that, provided stock and scion are of the right affinity, the distance of their union from the roots makes no difference. Should the stock be unable to keep the scion going all the time, there is a good reason for planting the graft low enough to allow the scion to take root,

in which case the stock only plays the part of wet-nurse. Of course, trees, even when on their own roots, may suffer through not being planted deep enough, and I suggest this as the explanation of the behaviour of the Apple trees at Great Bookham. It would be interesting to ascertain if these trees did root above the union, that is, from the scion, though that would not be conclusive on the point raised in "D.'s" note.—W. W.

Lilium Martagon dalmaticum.—All cultivators of the Lily ought to grow the Dalmatian Lily (L. Martagon dalmaticum), which is one of the finest of our varieties of the old Turk's-cap Lily. It is very distinct in appearance from the ordinary one, the most noteworthy points about it being its long, symmetrical spikes and its broad, pointed leaves, together with its tall stature and graceful habit. Its height is sometimes 6 feet and even 8 feet, and a good coloured form of a deep blood,



EUCCHARIS AMAZONICA GROWN FROM BULBS IMPORTED FROM TRINIDAD.

almost mahogany red, is very fine indeed. As now sold we seldom see any variety of colour in the plants, but the variety Cataniae or Cattanae, called by some a variety of dalmaticum, is still darker, being of a deep purplish claret. There are lighter-coloured forms of dalmaticum in existence, but these are not often offered.—LILIOPHILE.

FORTHCOMING EVENTS.

February 12.—United Horticultural Provident and Benefit Society's Committee Meeting.

February 13.—Royal Horticultural Society's Annual Meeting at Vincent Square, Westminster, 3 p.m. No show on this date.

February 14.—East Anglian Horticultural Club Meeting. Lecture by Mr. W. Messenger on "Chrysanthemums and Their Culture."

February 15.—Linnean Society Meeting.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

(Continued from page 36.)

The Best Varieties.—This is a very important question to consider in relation to the growth of this fruit for market. This lesson has been well driven home to us by Colonial and American growers. Unlike English growers, who have grown varieties of Apples by the hundred, most of them useless in comparison with the best, our cousins across the sea have confined themselves to very few sorts, and these mostly of attractive colour and large size. Once they find out the sorts favoured in English markets, they grow these by the ton; they grow little else. As an early August dessert variety the old Devonshire Quarrenden is hard to beat. The tree, although not an overstrong grower, lives to be old and forms a grand orchard tree. The colour of the fruit is distinct and attractive, and its flavour sweet and delicious. The variety is a free and consistent bearer. It is a favourite with everybody, and meets with a ready sale in the market. Later I hope to discuss the merits of a few more varieties, both dessert and cooking, for market and for private use.

The Apple as a Commercial Crop has never had a chance in this country. It has in the past been looked upon, more or less, as an article of luxury, and little thought, practical knowledge or intelligence has been brought to bear on its growth in this connection by agriculturists. A change in this respect is slowly but surely taking place, and the Apple, I am convinced, by its commercial value and its intrinsic merit as a food, will play a more important part among the products of the soil of Britain in future years than it has done in the past. I base this statement on the fact that England is perhaps the best market in the world for the disposal of this fruit, that the English people love a good Apple, and that our soil and climate suit its growth to perfection. Our imported Apples, if we except Newtown Pippin and two or three other sorts (which are sold at prohibitive prices), are soft, sleepy, tasteless, and not to be compared with the sweet, juicy, crisp and toothsome English Apple. It is hard to understand why men of means, youth and

energy will go to British Columbia and other places abroad to engage in the growth of this fruit, when by expending the same energy, labour and capital in this country a better return on the outlay would be secured. Provided that there is sufficient depth of soil from which the tree can draw sustenance and make healthy growth, the Apple is not particular as to the soil or subsoil it is planted in, provided it is well drained. It will succeed on chalk, gravel and even clay subsoils; but the ideal soil for its perfect growth is a deep, loamy soil, neither too light nor too heavy. As to climatic conditions, it thrives better, we know, in some counties than in others, where the conditions all round are more to its liking, such as is the case in Kent, Sussex, Worcester, Hereford and others; but that county must be a benighted one in which the Apple will not make a brave bid for success, especially if the varieties are judiciously selected.

The Selection of a Site and Shelter.—In a large orchard of many acres, the question of shelter is not so important as it is in the case of a small one, as the trees in the former plantation will naturally protect themselves in time. Where shelter from north, north-east and east winds is necessary, one of the best shelter trees to plant would be the Damson, planting the trees fairly closely together and giving a good depth to the plantation. A too high and bleak situation must be avoided, as well as one which is too low. The former would expose the trees and fruit to damage from wind-storms, and the latter position to destruction of the bloom by frost.

Preparing the Land for Planting.

It has been proved over and over again that Apple trees planted on arable land will make better progress in six years than they will in ten years when planted on grass land. This bad effect which grass has on the growth of Apple trees may be mitigated and reduced by preserving the 5-feet surface of open soil over the roots free from any other growth whatsoever, and extending its area as the tree progresses in growth and age. It will be well to make it clear to the inexperienced that it would be courting failure to plant Apple trees for profit on land which had less than eighteen inches of good loam for the trees to root into, and I may further suggest that it is always better for a man who is not well experienced in the matter to consult an expert possessing thorough practical knowledge of the growth of the Apple before embarking on the business.

Bushes or Standards.—There is something to be said for both. I notice that in some parts of Worcestershire standard tree planting largely prevails. This system offers a freedom of extension and of natural growth which the bush trees do not, and the trees in time attain a much larger size and retain their vigour and health for a longer time. Moreover, they require much less pruning and looking after once they are established. Bushes, on the other hand, have the great advantage of yielding a profitable return in much less time than the standard trees. Another advantage is that more than double the number of trees can be planted per acre, and the labour of gathering is considerably reduced. Of course, for small gardens, where a quick return is always desirable, bush specimens will be most favoured, but, as I have tried to point out, the choice of standards or bushes must depend largely upon circumstances, and the purpose for which they are required.

Planting the Trees.—A long season is available for planting, that is to say, from the first week in November until the last week in February. Some growers lay great stress and importance on planting early. It is a good plan, no doubt, but I have

planted successfully at all times between those dates. What is of more importance than dates, in my opinion, is the thorough preparation of the soil beforehand, and to be specially careful that it is not in a wet and sodden condition at the time of planting. Having got the holes ready, place the poorest of the soil at the bottom, reserving the best for the top spit of 9 inches, in which the roots will be planted and in which we wish them



A NEW HYBRID CYMBIDIUM: C. SCHLEGELII (MUCH REDUCED).

to remain, rather than that they should penetrate to the bottom poor soil. The question of mixing manure with the soil at the time of planting is one upon which growers differ. My experience in this matter has led me to the conclusion that if the soil is of a rather poor and light description, it is an advantage to add half a barrow-load of rotten manure to the soil of each tree at planting-time. On the other hand, if the soil is a sound, substantial loam of a fair depth, it would be a mistake to apply manure at all, remembering that it is not strong gross growth we are aiming at in the early stages of the growth of the trees, but growth of moderate size and hard texture.

OWEN THOMAS, V.M.H.

(To be continued.)

THE GREENHOUSE.

A NEW CYMBIDIUM.

(C. SCHLEGELII.)

THERE are a number of handsome Cymbidiums in cultivation, and no collection of Orchids would be at all representative without them. The latest acquisition to the genus is C. Schlegelii, a hybrid raised by crossing C. wiganianum and C. insigne. As described in our last issue under "New and Rare Plants," the flowers are spotted red over a creamy white ground, and the crimped lip is more heavily spotted golden brown and fringed soft pink. It was recently shown before the Royal Horticultural Society by Messrs. J. and A. McBean, Cooksbridge, when it received an award of merit. It is a beautiful hybrid of elegant habit.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

It is quite possible that some amateur cultivators may have had losses among their cuttings in cool structures owing to the excessive atmospheric moisture. The wise man, however, always puts in a few more cuttings than he will require plants (except of the new and rare varieties) so as to have a stock of young plants to select from. The losses would occur mainly in structures wherein there was a low temperature, such as unheated greenhouses and frames.

Well-Rooted Cuttings.

Directly these are removed from the propagating-frame they will show signs of distress if placed near ventilators or in any direct draught; and when the leaves droop, the cultivator must not apply water unless the soil is getting rather dry. If it be fairly moist, syringe the foliage with a fine spray not later in the day than two o'clock in the afternoon, so that by night the leaves will again be dry. When the soil really needs water, give sufficient to moisten it all through; there is

not much bulk of soil in the small pots, but at this season it does not dry up quickly. If some plants are to be potted on a certain day, the soil should be watered at least twenty-four hours previously, as it is a mistake to water and repot forthwith at this season.

The First Potting.—Of course, I scarcely need to remind cultivators that the pots and crocks must be washed and well dried before they are used. If the soil adheres to the sides of the pots, many roots will be destroyed at the next repotting. Inexperienced growers may not have realised this fact. In the January notes some advice was given on the matter of compost, the ingredients suitable being stated. I recommend the removal of much of the loose soil from the tiny ball, so long as it

does not unduly expose the tender roots. The latter must be kept well up in the new pot; do not bury the stem any deeper than is absolutely necessary for the firming of the plant. Gently press down the new compost with the fingers, and then place all the plants closely together on a stage near the glass, lightly syringing in the morning, and if the sun shines brightly, put a sheet of newspaper on them. In the course of a day or two a watering will be necessary, and at the end of a week place the plants further apart. From this stage they may be grown very sturdily, especially if carefully ventilated.

Young Plants in Houses and Frames.—Cuttings rooted in a bottom-heat are much more tender than those propagated on a cool base. A longer time is needed for the latter to root in; but when once roots are formed the plants grow apace, and are not subjected to any severe checks if a cold spell of weather comes. The former are, and consequently it is not advisable to put them in a cold frame as early in the year as the others. Undoubtedly the best plants are those which are grown slowly but steadily in a cool frame after the middle of February, so that amateur cultivators need not hesitate to place them in such a structure then. Keep old roots with cuttings for March and April propagation in a light, cool position. AVON.

FLOWER GARDEN.

THE GIBRALTAR CANDY-TUFT.

VERY welcome at this time of the year is any plant that produces its flowers in spite of the adverse conditions usually prevailing. The white variety of *Iberis gibraltarica* is one of these, and the past mild winter has been favourable for its development. The plants shown in the illustration are planted on the top and between the layers of stone in a wall, and commenced to flower about the middle of December. The photograph was taken in the second week of January. This Spanish plant is one of the largest of all the Candytufts, and there are two varieties in cultivation. One has flowers of delicate lilac in good-sized heads, which blooms later on in the spring. It is not so hardy as the white variety, although it grows freely in many places. Like all the other members of this useful family, the subject of this note is easy to grow, and will succeed in any sunny position in well-drained loamy soil. It may be propagated by means of cuttings in summer, and it also produces seeds. Like other members of the genus, it is evergreen. If allowed to grow in large clumps, it is most effective, resembling patches of snow when the flowers are well expanded. W. I.

GROUPING HARDY ANNUALS FOR COLOUR EFFECT.

VERY pleasing effects may be made with annuals alone, or in conjunction with other hardy plants, from the standpoint of colour simply. I have seen in two distinctly different gardens very beautiful effects made with varied shades of blue in one case, and that near to the sea; and in another with varied shades of pink and mauve, these latter being kept quite apart, although they might have been blended together. To enumerate what might be done in this way in full would take more space than can be afforded; but the suggestion made may be the means of setting garden-lovers thinking of what may suit their individual tastes, and with a careful selection be suitable to the situation or locality.

Blue-flowered Annuals.—I will enumerate a few blue-flowering annuals that may be so used.

the blue shades only; Sweet Peas, the pale blue, lavender, heliotrope and dark blue shades; *Brachycome iberidifolia*, the blue shades, suitable alike for beds and rockwork; *Centaurea cyanus*, in the blue shades; *Eutoca viscida*, a beautiful shade of blue and of compact growth; *Phacelia campanularia*, an annual well deserving of extended culture; *Nemesia hybrida* Blue Gem, which I have recently heard well spoken of; and *Nemophila insignis*, bright blue with white eye.

Pink Flowers.—In shades of pink there is also a good choice, but probably not quite so many dwarf-growing plants. Here Sweet Peas will provide a wide range of colour. I have seen these used with a lovely effect in conjunction with *Clarkia elegans*, *C. pulcherrima* and *C. integripetala*. These, if well cared for, will last a long time in flower. The pink shades of the Candytuft will supply an excellent variation of rather dwarf plants, also lasting well if not grown too thickly. The pink forms of *Aster sinensis* will serve a useful purpose, especially late in the season. There are also varied shades of pink to be found in the *Godetias*, bordering somewhat on to rose, no doubt, but still admissible. *Lavatera splendens rosea* is a distinctly useful annual of robust growth, better in a poor soil than otherwise. The shades of pink in *Phlox Drummondii* further enhance the list. *Viscaria elegans picta*, as a somewhat dwarf plant, is useful and distinct; *Silene compacta* varieties, as prostrate-growing annuals, are very effective.

Yellow and Orange Flowers.

—In varied shades of yellow and orange there is a wide choice, notably among the *Calliopsis* (or *Coreopsis*). The dwarf-growing and somewhat prostrate *Zinnia haageana*, in three or more shades, are valuable, not only from the point of effect, but also for their enduring character. The dwarf-growing *Marigolds*, also the *Tagetes*, are very effective and last a long time in flower. In *Dimorphotheca aurantiaca* we have an extremely useful yellow annual, and one that rather enjoys a dry situation. Of this annual and *D. pluvialis* we have also this season, offered for the first time, a choice selection of new hybrids, all of which will, I think, blend with the yellows. If they do not quite come up to the coloured plate that I have seen, they will still be beautiful. It would be quite possible to add many more annuals in shades of yellow, but any reliable catalogue will supply a further choice.

Crimson-Coloured Annuals could easily be found in a seed catalogue. Among these the *Coreopsis* will be found most enduring, likewise *Linum grandiflorum coccineum* and *Viscaria cardinalis*. In using these, however, I should, personally, be disposed to tone down the colour by using other annuals with white flowers. For fences where rapid growth is needed, nothing



IBERIS GIBRALTARICA IN THE ROCK GARDEN. THE PHOTOGRAPH WAS TAKEN EARLY IN JANUARY.

Viscaria cærulea, a rather uncommon plant, pale blue in colour and one that lasts well; *Anagallis linifolia cærulea*, a Gentian blue, dwarf in growth, thriving better in poor soil; *Linum perenne*, a lovely shade of blue, flowering for a long period, wants support; *Linaria maroccana*, in the blue shades of colour and varied; *Asperula azurea setosa*, light blue and fragrant; *Aster sinensis*, in

surpasses the *Tropæolums*, from the yellow *T. canariense* to the *T. lobbianum*, in great variety.

JAMES HUDSON, V.M.H.

Gunnelsbury House Gardens.

THE ROSE GARDEN.

GROWING ROSES OVER OLD FRUIT TREES.

IN many gardens throughout the country there are old fruit trees which, through neglect and other causes, are practically worthless from a productive standpoint, but which can, nevertheless be made good use of as supports for the majority of our Rambler

Roses. To be worthless for growing fruit does not of necessity mean that a tree has reached large dimensions; on the contrary, many which were grafted on dwarfing stocks will not be more than 10 feet to 12 feet high, an altitude that vigorous-growing Roses like the old *Gloire de Dijon* will quickly reach, providing the soil is well prepared before the Roses are planted. Then, in many old kitchen gardens there are decrepit espalier trees on the walls—trees which if left alone will in a year or two become veritable eye-sores to their owners, who may, for some reason or other, not feel disposed to grub them up and replant others. If a Rose or two such as *Claire Jacquier* or *Paul's Single White* were placed near the foot of such trees and allowed to ramble at will between and over their branches, they would in a year or two create a picture of rare beauty such as no Rose, however well it may be grown, is capable of when trained more or less formally close to the wall.

The preparation of the soil for the Roses has been mentioned, but previous to this some little attention should be given to the fruit trees which are to act as supports. It frequently happens that the branches of old trees are packed closely together, and some may be badly attacked by insect or fungoid pests, or be in an advanced stage of decay. In overhauling the tree all such should be removed, leaving only sufficient of the strongest and most healthy branches to form the desired framework for the Roses. It will also be a safe precaution to spray the trees with a caustic wash made by dissolving 1lb. of caustic soda and 1lb. of soft soap in ten gallons of water. Although this has a burning effect on the skin, it can be sprayed on the trees during a still day without fear of serious injury to the operator, especially if a pair of thick leather gloves are worn.

When the trees have been overhauled, stations for the Roses should be prepared. The number of Roses to be planted against each tree will depend largely upon its size and whether the owner requires a quick display or is prepared to wait several

years. For a tree 10 feet high and about the same in diameter, two or three Roses would be sufficient for ordinary purposes, and these should be all of one variety, or at least varieties of one colour, although this is, of course, mainly a matter of individual taste. In some gardens, where the soil is naturally favourable for the growth of Roses, it may only be necessary to dig the whole over two spits deep and work a good dressing of partially-decayed manure into the lower spit. On the other hand, the soil may be sandy and poor, and where such is the case it is useless attempting to grow Roses unless it is removed and replaced by good loam. A hole 3 feet in diameter and not less than 2 feet deep should be taken out for each Rose, and this ought to be not less than 18 inches from the

the best effect the shoots should be allowed to ramble almost at will over the branches of the fruit trees, so that an informal combination is secured. Old fruit trees of this description frequently produce a quantity of flowers, and as these open in the spring, the combination is invariably most pleasing at two seasons of the year.

Practically all the *wichuraiana* Roses, as well as most other ramblers, are suitable for growing in this way; but perhaps as a guide it may be well to name a few. In addition to those already mentioned, use might be made of *American Pillar*, *Dorothy Perkins*, *Gardenia*, *Hiawatha*, *Tea Rambler*, *Alberic Barbier*, *Jersey Beauty* and the beautiful little *multiflora simplex*. There are many others that could be utilised where greater variety is desired.



ROSE PAUL'S SINGLE WHITE ON AN OLD PEAR TREE.

trunk of the tree. All tree roots encountered in the process should be chopped through with the spade or a hatchet; it is not necessary to deal ceremoniously with them, because the tree as a fruit-bearing unit is not needed. These holes should be filled with good fibrous loam of a rather unctuous nature, mixing with it, to within 1 foot of the surface, plenty of partially-decayed manure, with a quart of bone-meal and the same quantity of basic slag to each hole. Both are slow in action, and will provide a storehouse of food for the Roses to draw upon just when they most require it.

The planting of the Roses may be done any time during February or early March. To obtain

has frequently seen winter and early spring flowering plants being hard pruned in autumn. The Winter-flowering *Jessamine* is often a sufferer in this respect, as also is *Forsythia suspensa*. As the time is fast approaching when it will be necessary to prune certain shrubs, the following suggestions are given as a guide to the uninitiated.

When to Prune.—Shrubs which require pruning at all may be roughly divided into two well-defined groups, according as to whether the flowers are produced on wood ripened the previous year or on the current year's wood. Having decided to which group a shrub belongs, it is necessary to ascertain whether the plant requires annual pruning or no. This is a difficult point to solve,

TREES & SHRUBS.

WHEN AND HOW TO PRUNE ORNAMENTAL SHRUBS.

ALTHOUGH in some directions far too much pruning or clipping of shrubs is carried on, especially in small gardens, for the shrubs ever to be able to assume their true character and to blossom as freely as they ought to, yet, on the other hand, there are numerous instances where a little attention to pruning would be the means of adding a great deal to the beauty of the plant. In the first place, the pruner must know his plants and have a definite object in view when he commences pruning. Too often, it is to be feared, pruning comes in with the general clean-up of the garden in late autumn. Then everything receives attention, irrespective of the time of flowering, and only too often wood which would provide a wealth of blossom two or three months later if left untouched is ruthlessly cut away. This is not so much the case in places where trained gardeners are kept as in small suburban gardens, where a man is employed casually who may or may not have had any real garden experience. To him all things are alike, and the writer

for it may be that the condition under which the plant is growing proves the deciding factor. Thus, *Jasminum nudiflorum* growing against a wall or over a porch has to be kept within certain bounds; therefore it is usual to cut the secondary branches hard back to within an eye or two of the old wood as soon as the flowers are over. But the same shrub growing under other circumstances might be allowed to go unpruned for a number of years. As a rule, however, it may be taken for granted that a biennial pruning will be beneficial, for it will keep the plant open and free from dead wood. *Forsythia suspensa*, when grown as a bush or in a formal bed, must be pruned back to within two or three eyes of the base of the previous year's wood as soon as the flowers fade. When grown in a shrubbery, however, it may be allowed to go unpruned. Grown against a trellis, a certain amount of pruning is necessary, but it should be less severe than in the case of specimen bushes, for hard pruning is conducive to stiff, strong, upright branches instead of the long, pendulous branches which are associated with naturally-grown examples. *Prunus triloba flore pleno* is another early-flowering shrub which is benefited by having its side branches when growing against a wall, and its secondary branches when grown in the open, cut back after flowering.

Early-flowering Shrubs.—Taking other early-flowering shrubs, such as *Hamamelis*, *Daphne Mezereum*, *Spiræa arguta*, *S. Thunbergii*, *S. confusa*, *Prunus japonica flore pleno* and the various *Barberries*, no regular pruning is required; but it may be necessary to thin them occasionally, prune them into shape, or reduce them when they seem to be outgrowing their places. Any such work should be done as soon as the flowers are over. Of those named, the *Daphne* will require the least, and *Prunus japonica* the most, pruning. The last-named may require attention about every third year. All the early-flowering *Heaths* should be cut back a little when the flowers are over, and the majority of the *Brooms* will be improved by having their wilder branches shortened after flowering. With regard to *Brooms*, it must be distinctly understood that they cannot be cut back successfully into wood which is older than two years, while it is better not to cut below the base of year old branches. The *Winter Sweet* (*Chimonanthus fragrans*) when grown against a wall is usually spurred back after flowering, but when grown in the open no regular pruning is necessary. *Magnolias*, again, require no other pruning than what is necessary to regulate growth for even development.

Later-flowering Shrubs.—Turning to shrubs which flower from young wood, the summer and autumn flowering *Spiræas* may be taken as examples. These, if allowed to go unpruned year after year, deteriorate; therefore they are cut well back, and such of the older wood as is becoming weak is bodily removed. The younger branches may be reduced to a height of from 9 inches to 15 inches, taking care to leave the shoots fairly far apart. Species such as *S. japonica*, *salicifolia*, *Douglasii*, *Menziesii*, *betulifolia* and *Margaritæ* belong to this group. The strong

growing kinds, *Aitchisonii* and *lindleyana*, may also be cut back in spring; but it is not advisable to be too severe with the pruning-knife in their case, for they sometimes have a habit of going wrong after two or three years of severe pruning. *Hydrangeas*, such as *paniculata* and its variety *grandiflora*, may be pruned in February, taking care to cut last year's shoots back to within a couple of eyes or so of the base. *H. arborescens* may be treated in the same way; but not *H. Hortensia*, for to prune the latter in spring would be to cut flowering wood away. The two *Brooms*, *Genista tinctoria* and *Cytisus nigricans*, require cutting back in February, for they flower from young wood. *Colutea arborescens* is in some gardens treated to an annual prune over in February, with satisfactory results. *Ceanothus azureus*, *C. americanus* and the numerous garden varieties which bloom in autumn need to have their branches shortened in February. As a rule, they may have

tended to bring this about. The Large-sided Cabbage, "the best in the world" in 1717, would be no match now for Carter's Mammoth Beefheart or Dobbie's Improved Winningstadt. Nor would the white, the yellow-purple and blue Pansies of 1724 be fit to put beside those figured in Cuthbertson's "Pansies, Violas and Violets." And the interest of a "regular Wilderness" or "a promiscuous open Grove" (Switzer's "Ichnographia Rustica," 1718) cannot compare with that of a well-grown pinetum.

It is wonderful how much more enjoyment can be got out of our gardens when we have learnt something of the past history of their inmates and something about the men whom we call great gardeners of the past. How much abiding pleasure we lose from not knowing at least a little of some of the chief strata of the rock whence they have been hewn, only those who have the knowledge can say. I once called on the late Bishop Westcott



RAMBLER ROSES ON OLD KITCHEN GARDEN WALL, WITH FLOWER BORDER IN FOREGROUND.

last year's wood cut back about halfway. The early-flowering *Ceanothuses*, on the other hand, such as *C. rigidus*, *thyrriflorus*, *papillosus*, *veitchianus*, &c., must not be pruned until after the flowers have faded.

W. D.

(To be continued.)

A GREAT GARDENER OF THE EIGHTEENTH CENTURY.

INTEREST in gardening is one of the outstanding features of British life in these opening years of the twentieth century. We are familiar to-day with vegetable wonders that were impossible 200 years ago. Improved means of transit, wider knowledge of plant-life, more scientific cultivation and the slow, coral-like accumulation of isolated facts have in their different degrees

of Durham when he was a Canon of Westminster. Our conversation turned upon books. I can never forget him saying in that strange, detached, rapturous way of his, which those who knew him will instantly recall, "It is something to have seen even the outside."

So of the great past of gardening. It is something to know even the names of those whose labour and influence have made it what it is.

One such name is that of Philip Miller—the Hortulanorum Princeps of his time in Europe—of whose justly-celebrated Dictionary no less a man than Linnæus said, "Non erit Lexicon Hortulanorum sed Botanicorum," who, looking at the circumstances of the age and the characteristics of his work, might without exaggeration be styled "the wet-nurse" of modern English gardening.

Born in 1691 at a time of transition; capable enough to be chosen by his compeers secretary to a society of gardeners and nurserymen, and editor of their projected work, a Catalogue of Trees, Shrubs and Flowers; well read and industrious, as a perusal of "The Gardeners' and Florists' Dictionary" of 1724 assures us; quick to take advantage of favourable circumstances with the unerring instinct of genius on the issue in folio in 1731 of what is popularly known as the first edition of his "Gardeners' Dictionary"; strong enough to take advice and far-seeing enough to adopt it, he, in his seventh edition, published in 1759, changed his classification from Ray and Tournefort to that of Linnæus; mindful of the pockets of the many, he issued in 1732, at the price of 4s., "The Gardener's Kalendar" (8vo), of which there were fourteen editions up to 1765; hoping thereby to provide work for more farm-hands in the dead season of the year—from harvest to spring—he urged the cultivation of Madder and wrote a treatise on the method of its cultivation, 1758; wishing to increase the usefulness of his great work, he was enabled by his fame and foreign correspondence to execute his superb "Figures of Plants" (1755—1760, republished 1798); unselfish, he accumulated no wealth, and when his powers failed in 1769 he resigned his office of Gardener to the Apothecaries' Company; Miller died on December 18, 1771, and was buried in Chelsea Churchyard, where the Horticultural Society erected an obelisk over his grave in 1810.

One purpose of this article is to suggest rather than to exhaust, and I am conscious that my description of him as unselfish is open to criticism, as is also my belief that he began life as a nurseryman and was the son of a market-gardener at Deptford or Greenwich. These are some of the points of uncertainty and interest which are suitable for the arm-chair by the fire.

Another, which is suggested by the frontispiece to the 1731 edition of his dictionary, is the sort of garden that Miller would be familiar with. Even if I were capable of such a thing, the due proportion of parts forbids me to make more than passing reference to the style that was *de rigueur* then. As may be seen from its reproduction on this page, it is a stiff, formal affair. The magnificence of Le Notre and the mathematical formality of William and Mary seem to be blended in its construction. So we have the long, straight canal with its fountains and waterfalls in the centre, and on the right a quadrated planted grove and an orangery, and on the left a wilderness with

"cabinets" or "halls" and a kitchen, and possibly a flower garden; while in the distance outside the garden proper there is an orchard and a vineyard with an artificially-raised "mount" between them, probably planted with Yews, so that the owner might be able to obtain a bird's-eye

view of all the diversities of his "hortulan" endeavours. their cultivation from his own experience. "There are very few Plants (out of the great number herein mentioned) which I have not cultivated, and the instructions given for their Propagation, &c., &c., are such as have succeeded best with me" (Preface, "Gardeners' Dictionary," 1731)

As the name of Miller is inseparably bound up with his dictionary, I will conclude with a chronological table comprising the chief of its different editions and noting the salient points of each. His other works, which have not been referred to in this article, are of minor importance; but a full list can be found in "Johnson's History of English Gardening."

Chronological Table.—1724: "The Gardeners' and Florists' Dictionary, or, A Complete System of Horticulture," 2 vols., 8vo, a book recommended by the Society of Gardeners, of which Miller was secretary. A sort of "scissors and paste" work. Switzer, Bradley, Mortimer, Evelyn, Liger, Laurence, Loudon, Wise, Fairchild and "Quintiney" are freely laid under contribution.

1731. "The Gardeners' Dictionary," folio, price £1 10s. A greatly-improved and enlarged edition with a frontispiece of a garden. This is popularly spoken of as the first edition.

1739. Abridged in two volumes (8vo).

1740. Issue of the third volume of abridgment.

1746. Translated into Dutch.

1750-51. Translated into German.

1752. Sixth edition of the folio dictionary, "the first complete edition." A new allegorical frontispiece—Industry pouring into Britannia's lap what Nature has denied.

1755-60. 300 Figures of Plants on copper plates, folio, issued at £6 6s. plain, or £12 12s. coloured. These plates were published in monthly numbers. There was a re-issue in 1798.

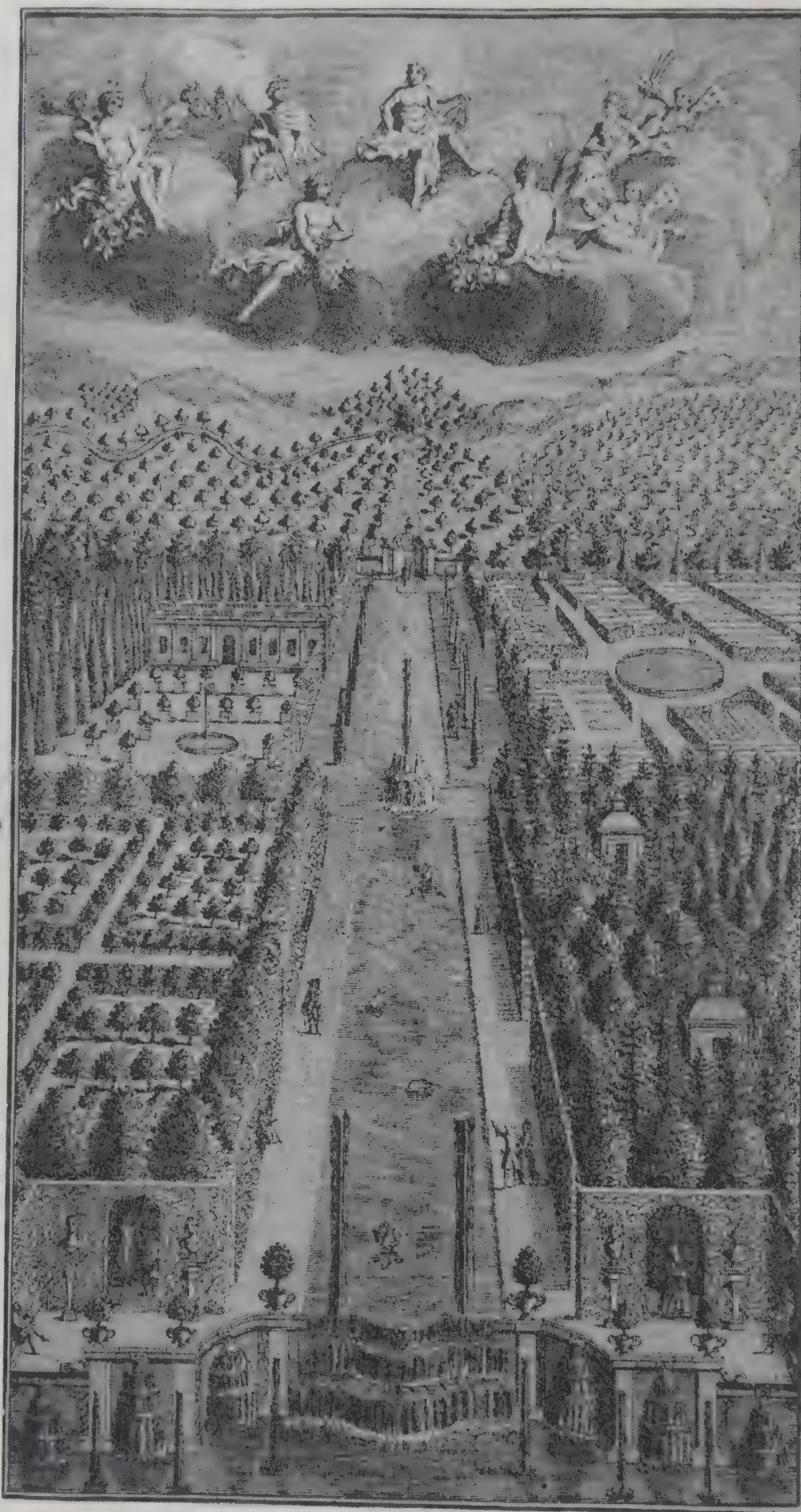
1759. Seventh edition. Published in numbers. Linnæan system first adopted.

1768. Eighth and last edition published in Miller's lifetime, "the number of plants cultivated in England in 1768 being more than double those which were known in 1731."

1785. Translated into French. Portrait of Miller engraved by Maillet.

1803-7. An enlarged, corrected and newly-arranged edition by Thomas Martyn, Professor of Botany at Cambridge. This includes a history of Miller's work, the life of Miller and the list of authors he (Martyn) used. "It is a standard practical work, never to be superseded" ("Johnson's History of English Gardening," 1829).

JOSEPH JACOB.



FRONTISPIECE TO MILLER'S "GARDENERS' DICTIONARY," 1731,
SHOWING THE STYLE OF GARDENING OF THAT PERIOD.

view of all the diversities of his "hortulan" endeavours.

I almost wonder at the selection of this frontispiece, for the influence of Miller was not so much in the formation of gardens as in the introduction of new plants and giving precise and good hints for

Botany at Cambridge. This includes a history of Miller's work, the life of Miller and the list of authors he (Martyn) used. "It is a standard practical work, never to be superseded" ("Johnson's History of English Gardening," 1829).

GARDENING FOR BEGINNERS.

THE STAR-FLOWERED PRIMULA.

MY little greenhouse is devoted entirely to Primulas. The Chinese Primulas (*P. sinensis*) succeed admirably in company with *P. obconica*, *P. malacoides* (a comparatively new and easily-grown species with small pink flowers) and *P. kewensis*, a lovely lemon yellow hybrid which at one time would not produce seed, but has since changed its ways and seeds with great freedom. If, however, I could grow one Primula only, I should unquestionably select the Star-flowered, or *P. stellata*. It is an ideal flower for the amateur's greenhouse, yielding lovely colour-tones and varied hues from autumn till late spring—a time when flowers are so much appreciated.

The cultivation is not difficult, for *P. stellata* is not so fastidious as some of its near allies; at the same time, a certain amount of care is essential. The great enemy is damp in the winter-time, and over-watering must be rigorously guarded against. Damp will also seriously affect the seedlings in the spring, and too much care cannot be given at this critical stage. I usually sow a few seeds in March for autumn flowering, and follow on from April to June for successional bloom. Shallow pans are certainly best for sowing. They must be clean, dry and well drained, and a light, fine soil, consisting of sifted leaf-mould, silver sand and loam, is the best medium for sowing. After sowing, the pans should be placed in a warm frame, each pan covered with a pane of glass, and as the seed germinates better in the dark, the glass should be covered with brown paper. Very little water will be necessary until germination has taken place, when both the pane of glass and the brown paper will need to be removed altogether. This is the critical time in the life of the plants, and anything in the nature of drip from the roof or an overdose of water may end with disastrous results.

When large enough to handle, the young plants should be potted off singly, or pricked out over an inch apart in larger pans or boxes. Cooler treatment should be given from the time of germination onwards, so that a few days after potting up the plants may be placed in a cold frame, keeping them as near the light as possible and giving air on all favourable occasions. Later on the plants will be ready to transfer to their flowering pots; the 5-inch pot is usually quite large enough. At the time of potting it is most important that the crown should not be buried under the soil, as this will induce damping off quicker than anything. Shade is necessary during the summer months, and a light, airy house is of vital importance. It

is not generally known how hardy this class of Primula is, for so long as the plants are protected from frost there is no fear of injury; the cooler the treatment the brighter and better are the flowers.

SPARTAN.

PROPAGATION OF CAMPANULAS.

Most Campanulas can be easily increased by division at the close of the flowering season; but

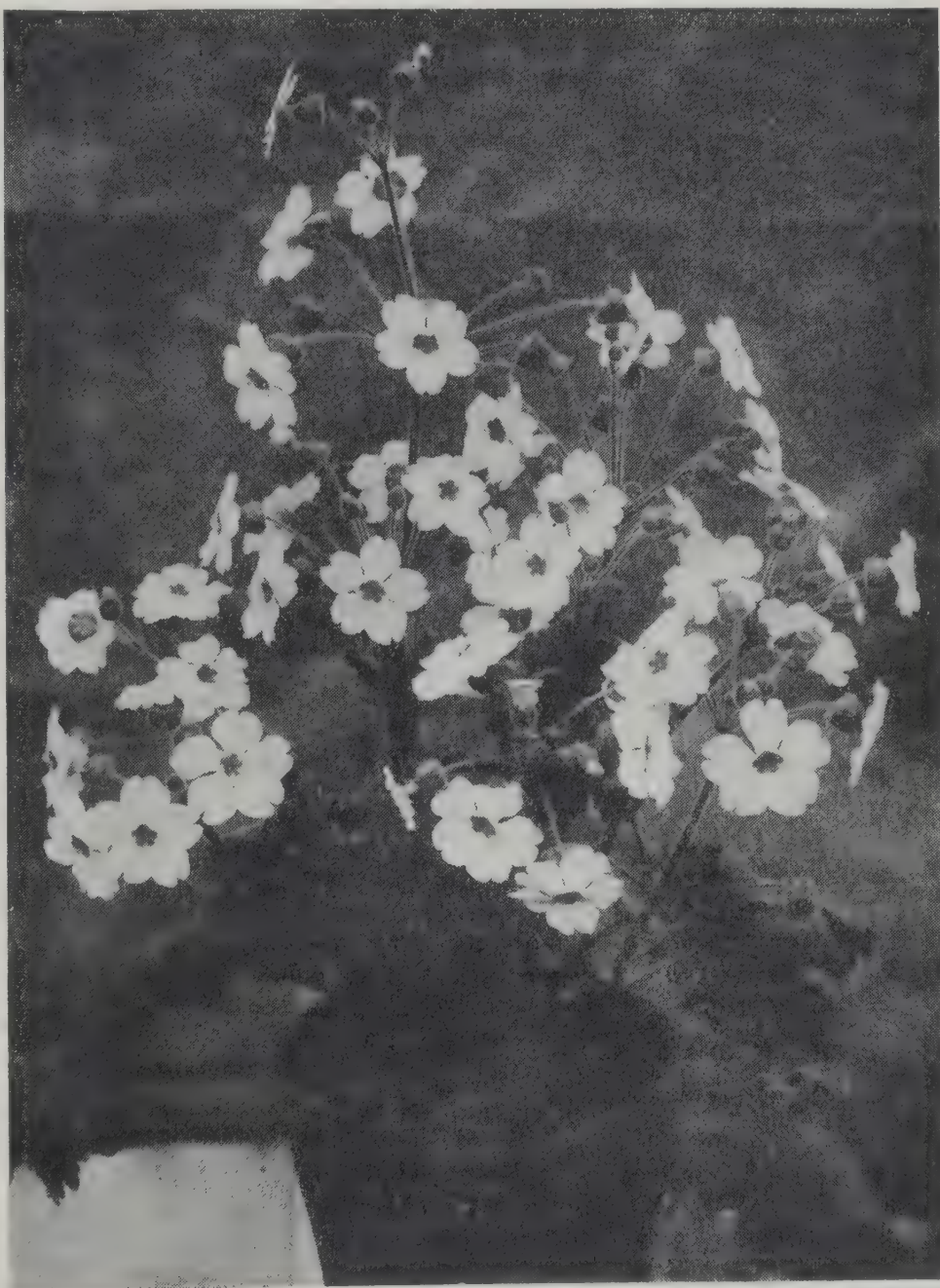
As soon as the young shoots are about an inch long, cut them off as near the base as possible, remove the lower leaves, and insert the cuttings in pots or pans of pure silver or river sand. If the stock plants have been in a heated greenhouse, the cuttings should be stood in a close case in the same structure; but if they have been in a cold frame, the cuttings may also stand in a cold frame, but it must be kept close. Three or four crops of cuttings may be taken this way before the old plants become exhausted. The cuttings will be rooted in four or five weeks, when they should be potted singly in 2½-inch pots, using a compost of half loam and half leaf-mould and sand.

After potting, plunge the young plants in sand or ashes in a cold frame, and keep close until the roots show themselves round the sides of the pots. At this stage air may be freely admitted. In a very short time the lights may be removed altogether and the young plants will be ready for their flowering quarters.

The following species and their varieties may be propagated in the manner described: *C. carpatica*, *C. Fergusonii*, *C. garganica*, *C. G. F. Wilson*, *C. Hendersonii*, *C. linifolia*, *C. portenschlagiana*, *C. pulla*, *C. pulloides*, *C. pusilla*, *C. rotundifolia*, *C. Stansfieldii* and *C. waldsteiniana*. Campanulas raised this way will make excellent plants and flower well the first season.

Stevenage.

C. DAVIES.



THE STAR-FLOWERED CHINESE PRIMULA, A GOOD GREENHOUSE PLANT FOR THE BEGINNER.

when it is necessary to raise a large number from a few plants, recourse must be had to cuttings. During January or early February plants of the varieties that are required for propagation should be lifted and placed in pots just large enough to allow of a little fresh soil being worked round the roots. If they can be stood in a greenhouse having a very little artificial heat, young shoots suitable for cuttings will very soon appear; if this is not available, a cold frame will answer the purpose, but, of course, growth will be slower in this case. A sharp look-out must be kept for slugs, which are particularly fond of the young, tender growths of Campanulas. An occasional dusting of fine slaked lime and soot will hold them in check.

is that of having the stones so arranged that they look almost like a wall, so evenly are they disposed. There should be no formality, and there must be sufficient pocket space to contain the necessary loam for the plants to grow in. A load of pieces of rock, as tipped from a cart on to a heap of soil, often looks more artistic than the same pieces would if placed in set order by hand. The workman must have plenty of soil as a background both for the stones and the plants. He should fix some of the stones quite flat; others must be upright. Shelves should be formed and care taken that all rain-water will run from the stones to the soil, not from stone to stone, and so conveyed away from the roots of the plants. B.

HOW TO MAKE A SMALL ROCK GARDEN.

VERY often quite inexperienced persons are requested to build rockeries, and although they are willing to do the work, they have no means of gaining any information in the immediate neighbourhood which will be of use to them. The general mistake made is the one of placing (packing would more truly describe it) the stones or pieces of rock too closely together. Then another mistake

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Parsnips.—The main crop of this vegetable may be sown now at any time when the ground admits of a good tilth being made. Select a piece of ground that has been well worked but not heavily manured, break the surface down with a fork, and finish off with a wooden rake. Sow in drills about an inch and a-half deep and 18 inches apart.

Peas.—On warm borders and congenial soils a sowing of Peas may now be made, though it is preferable to raise these in boxes, and the same applies to Broad Beans. With either always admit abundance of air whenever the weather permits.

Mint and Tarragon.—Roots of these may be lifted and boxed and placed in a growing house for supplying young growths for flavouring.

Globe Artichokes.—These will require protection in the event of hard weather.

Jerusalem Artichokes.—The ground for this crop should be well prepared and plenty of manurial agents added; then the same piece of land will grow them for several successive years. Plant the seed-tubers 6 inches deep, and 2 feet between the tubers and 1 yard between the rows. The white variety is preferable to the older purple-skinned sort.

Shallots may be planted as soon as the ground permits, and may also be grown on the same site for many years. Rake the ground down to a good tilth and press the bulbs into the soil to two-thirds of their depth, 9 inches apart and 1 foot between the rows.

Parsley in cold frames should be carefully picked over and decayed foliage entirely removed. The covering should be taken off, whenever possible, and air given.

Winter Onions.—Transplant these on to a well-prepared piece of ground that has been well worked. A sprinkling of mortar rubble and wood-ashes raked in on the surface will be beneficial. Plant the strongest of the seedlings from the rows that were sown out of doors at the end of August. Make the young plants quite firm at 15 inches apart and the same distance between the rows, and mulch with spent Mushroom-bed manure. Excellent Onions may be obtained in this manner, especially for exhibiting.

Radishes.—Make small sowings where a vacant place can be found between crops in frames on hot-beds.

General Work.—If the ground is not in too wet a state, push on the work of digging and trenching, and take out the trenches, throwing the soil out roughly for Celery, Runner Beans, Peas, &c., so that it can become pulverised before returning to the trench over a layer of manure. This method is an excellent one to adopt whenever possible.

Pruning Apples.—The two chief items to observe in pruning are a well-shaped tree, whatever form it may take, and branches well furnished with fruiting spurs. Bush trees in the garden often have to be restricted. Avoid overcrowding, and cut out superfluous branches neatly with a pruning-saw.

Peaches and Nectarines on Walls require the growths regulated, preserving as much young wood as possible and thinning out older wood, especially where devoid of fruit-buds. Train

the growths as straight as possible and make secure with nails and shreds.

Bush Fruits should not be allowed to become too dense. Black Currants merely require a judicious thinning. White and Red Currants and Gooseberries require the leading shoots tipped back, and others spurred back to two or three buds from the base, cutting out any weak ones entirely. The pruning of these is best deferred for a few weeks, otherwise the birds may take the remaining buds.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Herbaceous Borders.—Work left over from the autumn should be completed without delay, such, for instance, as dividing and replanting Asters, Rudbeckias, Helianthus, Senecio tangenticus, Solidagos and Aconitums. Spring planting retards flowering, which is in many cases a thing to be desired. Make the surface of the borders smooth and neat, and surface dress clumps of spring-flowering bulbs with a sifted compost.

Montbretias.—Replant these, working a nice lot of rotted manure deep down and planting the corms 8 inches or 9 inches deep. Those not lifted have been growing all through the winter, and will now be benefited by a dressing of manure on the surface, first, of course, clearing away the old foliage which has served as protection.

Carnations.—Those wintered in pots should be planted out where they are to flower, early planting resulting in a much better display of flowers than if it were delayed two months longer. Autumn-planted beds should be cleaned and dressed with pigeon-manure and a heavy application of soot. All diseased and withered foliage must be picked off at the same time. A reserve supply grown on in pots is advantageous.

Sowing Flower Seeds.—Seeds should be sown at once of good strains of Pentstemons to provide a grand autumnal display. Germinate in heat. Also sow *Verbena venosa*, first steeping the seeds for forty-eight hours in water to ensure rapid germination, and *Salpiglossis*, *Lobelia*, *Celsias*, *Pyrethrum*, *Delphinium*, *Lupinus polyphyllus* in variety, *Scabiosa caucasica*, *Petunias* and fibrous-rooted *Begonias*.

Onions.—I grow all Onions from seeds sown at or about this date in cutting-boxes and raised in a temperature of 55° to 65°. The boxes are stood one above another until the seedlings begin to appear, thus taking up little space, and are then transferred to a cooler structure. For ordinary bulbs the one transplantation from the boxes to the kitchen garden quarter serves.

Parsnips.—Seeds of these may now be sown, dropping a few at every 9 inches apart, which saves after-thinning. A big sowing of *Guerande* or another stump-rooted variety should also be sown.

Sowing Vegetable Seeds.—Sow more Spinach, Lettuces and Radishes in the open, and Brussels Sprouts, early Cauliflowers, Autumn Giant Cauliflowers and Lettuces in cold frames. These frequently come in very useful.

Celery.—For the main crop seeds of Standard Bearer may be sown in boxes, and a fortnight hence another batch of the same, choosing, according to the progress of each, those likely to give the best results. The trenches should be got

ready on cold mornings when nailing and pruning cannot be proceeded with, the ridges being utilised for dwarf Peas, Lettuces, French Beans and such-like.

Cabbages.—Spring Cabbages will now appreciate dressings of sulphate of ammonia, pigeon-manure or other stimulating material, subsequent to the application of any of these well stirring the ground and drawing some of the earth up the stems of the plants. These dressings and after-operations considerably hasten the turning in of the hearts, as well as causing them to increase in bulk later.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

Large-flowered Daisies.—In some gardens these are difficult plants to grow; in others they succeed. They are suitable plants for small beds in town gardens. Cultivators should now closely examine the stock. Earthworms lift the soil among them, and when particles lodge in the axils of the leaves or the crowns of the plants for a considerable time, the whole plant often dies. Any soil found there must be removed. Put on now a surface mulch of Cocoanut fibre or finely-sifted sweet leaf-soil to a depth of 1 inch.

The Laurustinus.—This is a really good plant for a town garden, and will succeed in nearly every town except those where there are many tall chimneys, much smoke and chemical fumes. The foliage is beautiful, the habit of the plant bushy, and the flowers are freely produced. Where these are grown as separate shrubs or to form hedges, a surface mulch of rotted manure should be put on now, and if the leaves are very much discoloured with soot and dust, they should be syringed or washed by means of a hose-pipe during rainy weather, as growth is freer when the foliage is clean.

Flowering Cherries.—These plants will also do well in ordinary soil in town gardens. They flower in spring and have a charming appearance. Standard trees may be planted now. The varieties *Prunus japonica alba* (double), *rosea plena*, *Juliana pendula* (lovely on a lawn) and *Sieboldii alba* and *rosea* (both double flowered) are beautiful.

The Flowering Currant.—This shrub is a valuable one for growing in a town garden. There are many borders on the north side of low walls or wooden fences which are difficult to fill satisfactorily. The Flowering Currant would succeed either as a hedge or as dot plants several feet apart. The varieties *Ribes sanguineum*, s. *atro-rubens* and s. *rubrum* (double flowered) should be planted.

Espalier Fruit Trees.—A few fruit trees are always much appreciated in town gardens; but in some parts they are not a success, and generally there is not much room for them. Espalier trees are those growing near the paths and trained to wires. Such do not take up much space. The following may be grown: Pears—Williams' Bon Chrétien, Marie Louise, Pitmaston Duchess, Doyenné du Comice and Durendeu; Apples—Warner's King, Lane's Prince Albert, Allington Pippin, James Grieve and King of the Pippins. Put in healthy young trees at once if the soil is dry enough, make the loam firm around the roots and put on a mulch of littery manure.

Daffodils.—The growth of these and several other kinds of bulbs is very forward, but cultivators

need not be afraid of frosts injuring them. If any growths are partially buried under leaves, clear the latter away forthwith, as they only serve to draw up the "grass" and render it weaker.

The Garden Frame.—From this date the management of the frame will become an easier matter. Ventilate Calceolarias freely and pinch off the tops of forward plants. Sow a few seeds of Pansies and Petunias.

The Greenhouse.—Aspidistras are so valuable for greenhouse, porch and dwelling-room decoration that it is advisable to take every care of the plants now. Repot any that require more rooting space, using fibrous loam, leaf-soil and sand, with a few lumps of charcoal in each pot. Water carefully afterwards. By potting now, the plants will be well rooted and strong by mid-summer.

TOWN GARDENER.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Early Potatoes.—It is, of course, early to think about planting Potatoes in the majority of gardens, but there will be some readers who are favoured with a border of deep, light soil beneath a fence or wall facing the south, and to these one may safely advise the planting of a few rows about the end of the month. The sets ought to be carrying splendid sprouts about one inch in length, and they should be covered with 6 inches of friable mould. The lines may be 18 inches asunder and the plants 12 inches apart in them, as it is important that a small-topped variety be chosen for this purpose. If wood-ashes are available, put some in the drills, and have immediately at hand some straw or other material for protection if wanted.

Long-pod Beans.—Before the month has run its course, a sowing of a favourite variety of Long-pod Beans ought to be made. It is imperative to success that the soil shall be in perfect mechanical condition, and that it shall contain plenty of food. The seeds must be set 3 inches asunder in shallow, flat-bottomed trenches, say, 2 inches in depth in a strong soil, and 3 inches in a light soil, and the covering soil must never be deeper than 1 inch at this early period of the year. If the plants are to be in single lines, the trench may be 5 inches wide; but for double rows they ought to be 12 inches, so as to allow a good air space between. When the plants appear, thin out as required to give each plant 6 inches for fruiting.

Shallots.—In the old days there was a rule to the effect that all Shallots must be planted on the shortest day of the year, and that the crop must be harvested on the longest day; but this has fallen into disuse, and happily so, since it is impossible to follow such hard-and-fast lines in a variable climate like that of our small island. If the cloves can be got in this month, so much the better; but if the soil is not in suitable condition for such work, leave them until next month, and there will be no real loss. For purposes of exhibition, the big red variety is the favourite; but for pickling, the true English Shallot is infinitely superior. The soil must be in excellent condition, and each clove should be pressed into the surface until the nose is just about level; a distance of 12 inches in all directions is suitable.

Parsnips.—These were invariably sown in the autumn in many gardens a few years ago, but the

system is not nearly so commonly adopted nowadays; most of us are content if we can get a few lines in by the end of February and make a successive sowing in March. The rows should be at least fifteen inches asunder, and the drills for the seeds ought to be about one inch in depth. Instead of sowing the seeds continuously, drop clusters of three at intervals of 9 inches, as this is conducive to finer plants and reduces the labour of thinning to the minimum. There is probably no variety superior to Tender and True.

Planting Horseradish.—This plant is commonly a noxious weed in gardens, because the bed is utterly neglected and the roots spread out in all directions. Those who desire to have a constant supply should be prepared to give the crop the same intelligent attention that they devote to other plants, and they will then have splendid sticks with no fear of trouble. The best system is to cut shallow trenches 3 inches or 4 inches deep and 14 inches wide, fill these firmly with rotten manure, and build up from them a ridge sloping to 6 inches or 8 inches wide at the top. Along each side of this, at a distance of 10 inches apart, push in whips about the size of the little finger, cut squarely at the top and slantingly at the bottom; the upper end should be just on a level with the soil surface when the task is done. Formed now, ridges will yield handsome sticks in one season, and there will never be any trouble in getting them. The length of the ridge will vary with the demands of the establishment.

H. J.

NOTES ON RECENT NUMBERS.

The Garland Rose (page 1, January 6).—Mention of the heps of this reminds one of the bright effect in late summer of those of *Rosa lucida*, a good old single Rose that would be worth growing for this alone. Besides its pretty rose pink flowers, the neat, polished leaves are always attractive, and in late autumn turn a bright yellow, and sometimes nearly scarlet, colour before they fall. There seem to be two distinct forms of this useful bushy Rose—the type, which is smaller and closer-growing and not more than 4 feet high, and a garden variety, which is more free in growth and larger in every way. The double *R. lucida*, with its pretty old name *Rose d'Amour*, should be in every garden.

Plants for a Blue Garden (page 7, January 6).—The plants available are fairly well exhausted in Lady Galway's copious notes, though among the Irises no special mention is made of the one of the truest blue colouring, viz., *I. pumila cærulea*. *Iris Cengialti* is also very near a blue, and a close match to it, and the bluest I am acquainted with among the Flag kinds, is a fine one named Chameleon. There is a wonderful new plant from Uganda, which, if it proves available for summer use as a tender annual, will be a great gain among the comparatively rare true blues. It has been successfully grown in the greenhouse by Mrs. Alfred Russel Wallace, from whom I lately received a flower. It is *Pychnostachys Dawei*, a many-branched plant about three feet high, with terminal flowers of the intense pure blue of a March sky. The individual flowers, which are in a crowded, bluntly conical head about one and three-quarter inches wide and high, are of the labiate form and of a velvety texture.

Bed of Tuberous Begonias (page 12, January 6). The illustration prompts me to remind those who make use of this fine plant of the good effect

gained by grouping and bordering them with the foliage of the Large Megasea or *Saxifraga* (*M. cordifolia major*). The leafage of the Begonias is their weak point; but if they are grown in a kind of irregular framing of the Megasea, they gain greatly by the association, the weak succulence of their own leaves being well replaced by the bold form and leathery texture of those of the Great Saxifrage.

Clematis Flammula (page 23, January 11).—Many are the ways of using this autumn-blooming species, but one of them, namely, that of treating it as a border plant, is not often thought of. But, planted at the back of the border, it is capital for training over other things that are out of flower, such as Delphiniums, and it is charming among the earlier Michaelmas Daisies. In our September borders we plant it next to one of the Starworts (*Aster umbellatus* syn. *amygdaloides*), which it much resembles, and run it up through a small grey-leaved Willow, which is kept trimmed to a convenient height. It makes a pleasant illusion of a Michaelmas Daisy breaking out of bounds and rioting as a climbing plant.

Romneya Coulteri (page 25, January 11).—The instructions for propagating by root cuttings are very useful. If others agree with my own observations, it would appear to be well to keep up a supply of young plants. With me, in a warm position in dry, sandy soil, it flowers well at two and three years of age. After that the plant grows large, but the blooms become very few.

G. JEKYLL.

LEGAL POINT.

Fence, Waste (*R. Cookham*).—A tenant for life of certain property removes a dividing fence for the purpose of erecting some workshops, which have since been removed, and the present owner of the property sends an enquiry as to the responsibility of the executors of the deceased life tenant. The question is one which may be entangled with an innumerable number of side points, but will be probably sufficiently disposed of by considering one or two tests. If in the original instrument the estate was given to the life tenant "without impeachment of waste," there is probably no remedy, as the act would not be sufficiently serious to amount to what is known as "equitable" waste. If, however, nothing is said about "waste" in the will or settlement, the act amounts to voluntary waste, and the only things to be considered are the effect of the Statutes of Limitation and some general principles. In case of an ordinary estate for life followed by a legal remainder in fee simple, the remainder man should apparently sue the life tenant for damages, assuming that he does not claim an injunction, within six years from the commission of the act of waste. There are certain complicated cases, namely, when there was no person entitled to an immediate fee simple in remainder, in which the statutory period does not run till the death of the life tenant, but these can at present be left out of consideration. Assuming that the present querist owned the immediate inheritance in fee simple, and neglected to take proceedings during the existence of the life interest, the right of action survives against the executors, but only provided the injury was committed within six calendar months before such person's death and action is brought within six months after the executors have taken upon themselves the administration of the estate and effects of the

deceased. I have dealt with the question under the simplest form it can assume, and the preceding remarks may be sufficient to enable the querist to decide whether he has any cause of action. If the limitations of the estate or circumstances are different to those here assumed, he should be advised in the ordinary manner.—BARRISTER.

THE EDITOR'S TABLE.

White Chrysanthemums from Leicestershire.

Two exquisite varieties of white Chrysanthemums, Heston White and Mme. R. Oberthur, have been sent to us by Mr. C. Ware, The Gardens, Quorn Lodge, Loughborough. The flowers arrived in a perfectly fresh condition, and, considering the time of year (the first week in February), they were remarkably good. Mr. Ware sends the following note: "I am sending a few Chrysanthemums for your table. I find Heston White and Mme. R. Oberthur the two best for late use. I have just finished cutting Mme. R. Oberthur and am now using Heston White."

Fruiting Sprays of *Garrya elliptica*.—*G. elliptica* is an ornamental hardy shrub known generally on account of its pendulous catkins, often 6 inches to 9 inches long and borne at this time of the year. The catkins of *Garrya* are male and female, borne on different plants, and while the elegant male catkins are known by their appearance, the female plant is less attractive and seldom cultivated. Sprays of the female *Garrya* bearing clusters of small black berries have been sent to us by Mr. Thomas Smith, Coombe House Gardens, Westbury-on-Trym, together with the accompanying note: "I am sending you a bunches of fruit of *Garrya elliptica*. I dare say you know the female form well enough, but I think it is not very often met with."

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SEED-SOWING IN THE OPEN (W. L. A.).—We take it that you are referring to hardy annuals chiefly; and if so, the early days of March, provided the state of the soil and climatic conditions permit, will be found suitable for a large number. Not a little, of course, depends upon the object in view; but, assuming that ordinary garden decoration is intended, the time stated will do quite well. The condition of the soil, however, is important, and moderately dry soil is the best. The list of plants that may be sown where they are intended to flower is rather a long one, and may be said to embrace the majority of hardy annuals. Some of the more worthy would, naturally, include Poppies, Mignonette, Linums, Marigolds, Tom Thumb Nasturtiums, *Nemophila insignis*, the whole array of annual Chrysanthemums and such as coronarium in variety, carinatum in variety, and those greatly-improved varieties of *Chrysanthemum segetum* known as Morning Star, Evening Star and Southern Star more particularly. *Nigella*, *Godetias*, *Lupines*,

Larkspurs, *Candytufts* of several shades, Sweet Peas, Sweet Sultans, *Statice sinuata*, Indian Pink, *Eschscholtzias*, *Calliopsis* and many more might be so treated and attended to in the important matter of early thinning calculated to give the best results. To obtain a full measure of success, this latter work must be done with no niggardly hand.

SWEET PEAS (Dolphin).—The following varieties will suit your purpose admirably. You give no indication of the number you require to grow, so fifteen are named. Elsie Herbert, Florence Wright, Eric Harvey, Sunproof Crimson, Mrs. C. W. Breadmore, Countess Spencer, John Ingman, Helen Lewis, Clara Curtis, Mrs. Hugh Dickson, Walter P. Wright, Mrs. A. Ireland, Thomas Stevenson, Princess Victoria and Tennant Spencer.

LILIES OF THE VALLEY (R. C. L.).—You should obtain the Lilies of the Valley and plant them without delay. Any nurseryman or bulb-dealer will supply you, and your better way will be to purchase single crowns of the Berlin variety and plant them 6 inches apart over any area you like. The crowns, if of the best quality, should flower in spring, though of necessity only moderately well because of the check produced by enforced idleness and dryness. The plant delights in the richest soil, much moisture and a partially cool, sequestered spot. November would have been a better time for the work.

HARDY ANNUAL OR HARDY PERENNIAL (H. E.).—Among hardy perennials we know of nothing better than the crimson-red of the Mossy Saxifraga Guildford Seedling, which, with its carpet of deep green leaves, would constitute a good contrast to the blue-grey foliage of the Pinks at any time, and in a dual sense in regard to the flowers. The plant is hardy, of easy culture and free in growth. We know of no plant likely to fulfil the requirements of your second query. Some good plants with orange-coloured flowers are *Dimorphotheca aurantiaca*, a Marguerite-like flower, and the rich orange-flowered *Nemesia*, but in your district it is highly probable that these would require some care to ensure success. You do not say to which *Omphalodes* you refer, but, having mentally recalled them all, our reply to your enquiry is as above.

BOG GARDEN (Miss P.).—It will not do to turn your small tank into a bog garden unless there is some outlet at the bottom for superfluous moisture, for, if you have no such outlet, the soil will soon become sour and unsuitable for the roots of plants, in addition to being very disagreeable on account of the smell. After arranging for an outlet, place a good layer of bricks, covered with cinders or coarse sand. On this place a good layer of turf, grass-side downwards. Then fill up with a compost of coarse loam and sand in one part, and coarse peat and sand in another, to suit the different kinds of plants which you are likely to grow. Arrangements must be made to provide sufficient water to keep the soil thoroughly wet. With a natural bog there is not the same tendency for the soil to become unsuitable for the plants as there is in a small, badly-drained tank; but even in such cases moisture-loving trees do not make progress unless a certain amount of drainage is done before planting. All the river mud ought to be taken out of your tank. Fresh soil will answer your purpose very much better.

TREES AND SHRUBS.

GOLDEN PRIVET SHEDDING ITS LEAVES (H. E. J.).—We should imagine that the recent wet weather may have caused the leaves of your Golden Privet to fall, that is, if your ground is heavy. Water-logged soil lies very cold, and very cold, wet ground or atmospheric cold are both likely to cause the same thing. After a frosty period it is always expected that both the ordinary Oval-leaved Privet and the Golden-leaved variety will lose a quantity of leaves, the number being determined by the severity of the weather. Without knowing the exact conditions under which your plants are growing, we are unable to offer any other solution of the trouble.

BLACK WALNUT (W. M.).—We do not know of any firm of nurserymen in the British Isles who would be able to supply two year old plants of Black Walnut in the way you require them. If you cannot obtain the young trees, it is probable that you could procure Nuts to raise your own trees from. The Black Walnut requires a deep, loamy soil, and thrives best below a latitude of 500 feet. It is not well suited for a very exposed position, although quite hardy. The timber of trees grown in the British Isles has been reported on very favourably by cabinet-makers. The tree requires a fair amount of sun during summer and autumn to ripen the wood.

LABURNUM FLOWERING IN WINTER (W. S.).—We are at a loss to account for the behaviour of your Laburnum, and can describe it as nothing else than a freak of Nature. Had the tree grown at the ordinary time and simply borne flowers in autumn, the explanation would have been easy, for a form of *Laburnum alpinum*, which is one of the parents of *L. Parksii*, blossoms regularly in autumn and bears the varietal name of *autumnalis*. It is also usual for other Laburnums to bear a few blooms in autumn, particularly when a moist, warm autumn succeeds a hot, dry summer. We have not, however, previously heard of a plant never coming into leaf until autumn, for four successive years, and flowering in January.

SLOE HEDGE (B. C.).—It is doubtful whether you will be able to form a really good Sloe hedge and obtain a good crop of fruit from the Sloes likewise, for the best hedges are only obtained by repeatedly cutting the branches back, and the best fruiting plants are those which are allowed to grow freely. If you allow your hedge to grow wild for the sake of fruit, the bottom is almost sure to become thin; therefore, if a protective hedge is the first consideration, we should advise you

not to trouble about the fruit. We have not heard that any special experiments have been made with the ash of burnt peat with a view to ascertaining its manurial value, but we should imagine that it might be used in the same way as wood-ash and produce very similar results.

THE GREENHOUSE.

ODONTOGLOSSUM LEAVES DROOPING (G. R. P.).—We are unable to give any reason why the leaves of your *Odontoglossum* are drooping unless we see a specimen, preferably a whole plant, or at least a pseudo-bulb with leaves attached. Your plants have undoubtedly received a severe check in some way, such as overwatering, which would cause the roots to decay. This is usually followed by the shrivelling of both the pseudo-bulbs and foliage. Can you possibly mean the leaves are *drooping* instead of *drooping*, as stated in your letter?

PLANT FOR NAME AND TREATMENT (C. W.).—The name of the specimen sent is *Chlorophytum elatum*, a very useful greenhouse plant. It is a native of South Africa, and for its successful culture needs to be kept safe from frost. It is not at all particular in its requirements, and may be potted in a compost suitable for the general run of greenhouse plants, that is to say, a mixture of loam, leaf-mould or peat and sand. You do not say whether you have a greenhouse; if so, it will succeed perfectly therein; but if not, it may be grown in a window. Indeed, it has a very pretty effect, as then the long, pendulous spikes, terminated by tufts of growing plants like that sent, at once arrest attention by reason of their uncommon appearance. Botanically, it belongs to the Order Liliaceæ.

FERNS FOR WARDIAN CASE (A. B.).—Ferns of an evergreen character suitable for growing in a Wardian case under the conditions named are *Adiantum æthiopicum*, *A. Capillus-veneris* (British Maidenhair), *A. fulvum*, *Asplenium Colensoi*, *Blechnum occidentale*, *Davallia canariensis*, *D. Mariesii*, *D. Tyermanni*, *Doodia aspera*, *Doryopteris palmata*, *Lastrea aristata variegata*, *L. lepida*, *Nephrolepis cordifolia compacta*, *Onychium japonicum*, *Pellaea ternifolia*, *Polystichum triangulum*, *Pteris cretica albolineata*, *P. leptophylla*, *P. scaberula*, *P. serrulata gracilis* and *P. grevilleana*. That pretty Creeping Moss, *Selaginella kraussiana*, often called *Selaginella denticulata* and *S. hortensis*, will clothe the surface of the ground with bright greenery. We have named more Ferns than you will require, in order to give you a choice, as tastes vary so much.

DATURA AND COBÆA (M. K.).—It is impossible to decide from the specimen sent why your young *Datura* has failed to grow; neither are we able to suggest the specific name from so young a plant. There are several kinds of bushy *Datura* which would thrive out of doors with you during the greater part of the year, and perhaps the whole year round, as is the case in some parts of Cornwall. The best kinds are *D. sanguinea* (red), *D. suaveolens* (white) and *D. chlorantha* (yellow). You would be well advised to obtain young plants from a nurseryman, rather than try to grow your own from seeds. Once you have obtained stock plants, you may increase the number of your plants by means of cuttings. Leave your plant of *Cobæa scandens* alone for another month or so; then cut the side branches back to within a bud or two of the base. You might try plants of *Cratægus Pyracantha* against the wall you mention. They are not self-clinging, therefore you will have to secure the branches firmly to the wall. Give them good soil when you plant them.

INJURY TO GERANIUM LEAVES (W. H.).—There is no doubt that the injury to the *Geranium* leaves sent is caused by too damp an atmosphere. *Geraniums*, or, more properly, *Zonal Pelargoniums*, need a light, buoyant atmosphere, while the condition of your vinery is certainly the reverse. The temperature named is quite correct for them, but there is decidedly too much moisture. Cannot you remedy this by giving air whenever possible? At the same time, the weather of late has been so excessively wet that the vinery would in all probability be damper now than in an ordinary season. If the blue mould strikes deep into the cut portion of the Vines, just touch these cuts over with painters' knotting. The specimens sent are: 1, *Begonia weltoniensis*; 2, *Cyrtanthus angustifolius*; 3, *Agave americana* (American Aloe); 6, *Zonal Pelargonium Paul Crampel*; 7, *Gasteria* species; 8, *Echinocactus* species; 9, *Mesembryanthemum* species; 10, *Begonia semperflorens* Snowflake; 11, *Crassula* (*Kalosanthes*) *coccinea*; 12, *Zonal Pelargonium Dr. A. Vialettes*. The specimens numbered 7, 8 and 9 cannot be named more definitely without flowers.

MALMAISON CARNATION AND GARDENIA (R. W.).—Judging by the leaves of the Malmaison Carnation, the plant is infested both by red spider and rust. For the former, sponge the leaves, particularly on the undersides, with a lather of soft soap and warm water, and for rust, or Carnation leaf spot, as it is sometimes called, cut off the worst of the infected leaves and burn them at once, afterwards spraying the remaining leaves with Veltha Emulsion. For Malmaison Carnations a light, airy house is essential, and during the winter a night temperature of 45° is quite warm enough. You do not say what state your plants are now in, otherwise we might advise you further. The *Gardenia* needs to be potted in a mixture of two-thirds loam to one-third leaf-mould and a sprinkling of silver sand. As the pots get well furnished with roots, a mixture of soot-water and liquid manure will be beneficial. *Gardenias* will thrive during the winter in a structure where a minimum temperature of 50° is maintained, rising, of course, during the day. They may also be successfully grown under warmer conditions. As with the Carnations, if we knew the state of your plants we could give further advice.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object he wishes to make the "Answers to Correspondents" columns a conspicuous feature, and, when queries are printed, he hopes readers will kindly give enquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITOR OF THE GARDEN, accompanied by name and address of the sender.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Office: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Apple Prunings.—While Apples are being pruned it is well to remember how useful the best pieces are as small flower-sticks; they are specially good for Carnations. It is as well, in order to keep them fairly straight, to tie them in bundles.

Rose Richmond in February.—We have never been so impressed with the beauty and value of this Rose as a good forcing variety as on the occasion of the last meeting of the Royal Horticultural Society, when Messrs. Mount of Canterbury exhibited a hundred or so of its superbly-coloured, long-stemmed flowers. The freshness, fulness, size generally, colour and fragrance, with foliage and stems of such ideal character, rendered the group one of the chief attractions of the meeting. We believe the date in question, *i.e.*, February 6, to be the earliest on which this well-known Rose-growing firm has staged this Rose—certainly in the perfection in which it was seen.

A Winter-flowering Greenhouse Climber.—The Hibbertias form a class of Australian shrubs, a couple of which at least are of a twining nature. The first is the vigorous-growing *H. volubilis*, whose showy yellow flowers have an evil smell; and the second, *H. dentata*, which is a really valuable climber for the greenhouse, whose merits are enhanced by the fact that it blooms throughout the entire winter months. It is of fairly quick growth, and mounts upward by twining its thong-like shoots around any support. The ovate leaves are leathery in texture, and of a dark bronzy green when mature; but when young they, as well as the bark of the young shoots, are red. This latter feature varies in intensity according to the amount of exposure to which the plant is subjected. The golden yellow flowers are about a couple of inches across, and somewhat suggestive of those of an *Hypericum*. From a foliage point of view alone it is a very pretty climber, and, of course, additionally so when in bloom. A third species, *H. Readii*, forms a dense, twiggy bush, with yellow flowers about the size of a shilling.

Winter Broccoli.—Rarely indeed has the visitor to the fortnightly meetings of the Royal Horticultural Society had an opportunity of inspecting so fine a group of winter Broccoli as that staged by Messrs. Sutton and Sons, Reading, on the 6th inst. There were three notable varieties arranged on a spacious table. Basket after basket of the compactly-formed heads or curds demonstrated to what high excellence the culture of these greatly-esteemed winter vegetables has attained, yet, despite this, improvement by selection and otherwise is constantly going on. The three sorts staged were Snow White, Winter Mammoth and Sutton's Superb Early White, than which

latter none could possibly be more beautiful or inviting.

What to Plant Beneath Trees.—This is an oft-recurring question in large and small gardens. For clothing the bare soil beneath deciduous trees, and at the same time a good flowering plant, it would be difficult to surpass the St. John's Wort (*Hypericum calycinum*). The foliage is evergreen, and the comparatively large yellow flowers are produced freely in summer. The readiest means of propagation is by division of the roots. Three years ago we planted a large bare piece of ground beneath a Lime tree with this *Hypericum*, placing the tufts 15 inches to 18 inches apart. At the present time the plants form a perfect green carpet beneath the tree. To prevent the old growths in course of time spoiling the effect, every second year it is advisable to cut down the growths early in April to within about three inches of the ground.

Senecio Petasites.—This is the correct name of the yellow-flowered greenhouse plant exhibited by the Countess of Ilchester, Abbotsbury, Dorchester, under the name of *Senecio grandifolius*. Both have yellow flowers, which are produced in midwinter, and both are natives of Mexico. Growing side by side, however, the plants are very distinct. The flowers of *S. grandifolius* are richer in colour and borne in a flattened corymb, whereas those of *S. Petasites* are disposed in a large thyrsoïd panicle. *S. grandifolius* has rich deep green leaves about eighteen inches in length and half as wide; in *S. Petasites* they are light green and roughly round in outline. The stems of *S. grandifolius* are dark purple, those of *S. Petasites* being light green. Both species are readily propagated by cuttings in spring.

Plumbago rosea superba.—A correct estimate of the value of this charming Indian shrub can be made when it is seen in flower, as in the greenhouse at Kew, with numerous other plants which bloom during the two dullest months of the year, for throughout the last few weeks it has presented a most attractive feature and readily commands a large share of attention from visitors. Its clear, rose-coloured flowers are larger than those of the type, and they are carried in finer inflorescences. Whether grown in 5-inch or 6-inch pots, with several branches rising to a height of 3 feet or more, or as single stems, terminated with a large head of flowers, in 3-inch pots, they are equally pleasing, and are very effective when arranged with green foliage plants, Roman Hyacinths or Paper-white Narcissus. The larger plants may be obtained from cuttings rooted during spring, and single-stemmed plants from cuttings rooted in summer. Whoever is responsible for keeping a warm greenhouse or conservatory gay during winter would do well to make a note of this plant.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Creeping Jenny as a Basket Plant.—One occasionally, but less frequently than before, comes across the old Creeping Jenny or Moneywort (*Lysimachia Nummularia*) as a basket plant in cottage windows. It looks very pleasing in summer with its long sprays of rounded green leaves freely set with their yellow flowers. The golden-leaved variety, *L. N. aurea*, is also very pleasing, as the leaves are a good yellow and the flowers harmonise well with the coloration of the foliage. This makes a good basket plant also, and one finds many inferior things cultivated for the purpose.—A. M. D.

Crocus vitellinus.—This Crocus is a little species which comes very early, and whose bright yellow flowers are appreciated as coming in before most others of its colour. I have not found it such a long-lived plant as some of the other Crocus species, and have lost it more than once. It is one, I think, which is all the better for a little shelter from the stress of winter in our climate. This can be afforded by placing a bell-glass or handlight over the clump. These are preferable to a simple sheet of glass elevated above the flowers by wire or other supports, as the latter, while throwing off rain and snow, will not check the rude winds of winter, which spoil the flowers of a little Crocus such as this, whose brightness we wish to prolong as much as possible.—S. ARNOTT.

Cotoneaster horizontalis.—This Chinese species of Cotoneaster was introduced about thirty years ago. It still holds its own as one of the most striking and distinct of all the Cotoneasters, and one withal that passes through several distinct phases of beauty during the year. Commencing with the spring, the tender, unfolding leaves and the pretty pinkish flowers combine to form a pleasing feature; then the berries, like drops of sealing-wax, assert themselves, and the autumnal tints (for it is deciduous) are very bright. Lastly, in the winter the curious, horizontally-spreading style of growth is very noticeable, particularly when the regular fish-bone-like arrangement of the minor twigs is outlined by hoar-frost. Cotoneaster horizontalis is a good wall plant.—H. P.

A Little-known Red Salvia.—I should like to recommend to your readers *Salvia Pittieri*. This seems a little-known plant which deserves to be much more generally cultivated. It is not hardy, but is less tender than *S. splendens* and much more easily grown. When planted out in May it soon makes large, bushy plants 3 feet high and as much across. The flowers are a beautiful blood red (not quite so scarlet as *S. splendens*), each flower as large as, or larger than, *S. patens*, and of the same shape and velvet-like consistency, forming spikes of bloom from six inches to ten inches long. By the end of September the whole plant is a blaze of red, making a most effective and welcome bit of colour thus late in the year. It is a plant which likes a good deal of moisture to its roots, but should be fully exposed to the sun, when it will retain its beauty until cut down by the frost. It is very easily propagated by cuttings.—(Miss) SELINA RANDOLPH, *Chartham Rectory, Canterbury*. [*Salvia Pittieri* is a rather rare plant in this country. It is a native of Costa Rica. It was discovered by M. Pittier in 1888, but for some reason is still but little known.—ED.]

Sweet Pea Thomas Stevenson.—In reference to our remarks about this variety in connection with the coloured plate presented with our issue for February 3, Messrs. Dobbie and Co. inform us that it was their stock which received the award of merit at the National Sweet Pea Society's trials last year. It was also reserved for the silver medal, and has to be grown for that purpose at the trials this year.

Cassia corymbosa.—This beautiful flowering shrub does well in the mild climate of the Isle of Wight. My friend Mrs. Evans writes me from Ventnor: "Every year it is covered with flowers, and has seeded now for the first time. It is 8 feet high, and is a lovely sight for months. It begins to flower in July, and on January 9 there were still a few flowers left." Those who have the advantage of a suitable climate should not forget this fine thing. With its polished pinnate foliage and orange-coloured blooms it has that distinguished and well-dressed character that makes it a welcome ornament on the walls of a dwelling-house.—G. J.

Snake's - Beard Plants for Rooms.—The Snake's-beards, or Ophiopogons, are excellent plants for the conservatory, but they are also highly useful for the dwelling, and their ability to stand a low temperature in winter makes them of great service for rooms which are frequently unheated for days at a time in winter. A good plant of *O. Jaburan variegatus* has stood with me for a number of years in a room which seldom has a fire in winter, and its prettily-variegated foliage stands the vicissitudes of every season well. It blooms in summer, giving spikes of blue flowers fairly freely. A soil of an open, sandy character suits this and the other Snake's-beards best.—M. D.

A Stream Garden.—The pretty picture of *Iris laevigata* on the bank of a narrow water-course (page 48 of January 27 issue) reminds one of a still more desirable way of treating such a place. It is always best, when plants and water are in company, for the flowers to be as nearly as possible on the same level as the water. When it is down in a ditch-like hollow, the water is not easily seen, a good deal of the pictorial effect being necessarily lost when the eye has to take a separate view of the water and the plant. Such a place suggests the making of a really beautiful water garden by excavating the soil on both sides of the stream for a width of several feet down to within 3 inches or 4 inches of the water-level. If the landward excavation is left on an easy slope, and the spare earth is thrown up just beyond, quite a wide piece of bank is gained. The path, preferably of rough, flat stones, may vary its course by here and there crossing the stream. If the top of the bank is planted with suitable bushes of wild character, such as Thorns, Hollies and some of the better Brambles, the water garden will soon gain complete seclusion. The shadier banks will be a happy place for hardy Ferns, never handsomer than when seen across a little stream with a wide setting of Water Forget-me-not; indeed, if the more important of the hardy Ferns are largely used, the place will gain that inestimable quality of quietude and restraint that is so often painfully lacking in planted ground. A beautiful water garden may be made with native plants alone, for, in addition to the most desirable Ferns, which will be Lady Fern, Male Fern, Osmunda, Hart's-tongue and Dilated Shield Fern—there are many others, but these would be enough—there are the Water Plantain, one of the most beautiful of foliage plants; the

Flowering Rush (*Butomus*), with a curiously refined kind of beauty that makes one think of some rare stove exotic gone astray; the yellow Flag, the grand Marsh Marigold, Snowflakes, Lent Lilies, Fritillaries, double Cuckoo-flower, Meadow Orchis, Meadow-sweet, the large blue Meadow Crane's-bill and the Great Water Dock. This list by no means exhausts the native ornamental plants of stream, bog and cool bank, but names enough for the planting of a good hundred yards or more of stream garden to great advantage.—G. JEKYLL.

A Beautiful Stove Plant.—*Astrapæa Wallichii* is a most elegant stove evergreen tree; it has often been described as being one of the finest plants introduced into this country, and when seen in flower it captivates the attention of all gardeners. Its native home is Madagascar, and it was introduced to this country about 1820. The colour of the flowers on the true plant should be scarlet. In 1910 a seedling plant was sent to us from the Royal Horticultural Society's Gardens; it was carefully grown on till it reached a height of 12 feet, and about the middle of December it began to flower. The colour of the blossoms of this plant is rather a pale pink, and they are fragrant. It is very easy to grow, providing one has sufficient heat.—W. D. P., Wareham.

Erlangea tomentosa.—On several occasions within the last two or three years attention has been directed to this showy composite in the various horticultural journals, and quite recently several good groups were noted in the greenhouse at Kew. *Erlangea tomentosa* is a native of Tropical Africa, where it appears to be widely distributed, especially about the East and in the neighbourhood of the Zambesi River. Under natural conditions it grows 5 feet or so high, but as a cultivated plant it may be kept dwarfer by stopping the shoots. In this way fine examples 2½ feet high and as much through are obtained. The oblong leaves are about five inches in length, and they have rather coarsely-toothed margins. The lilac flowers are borne in flattened panicles 6 inches or more across, and they remain in good condition for several weeks. Cuttings rooted in spring grow into good-sized plants during summer if given rich loamy soil and an intermediate temperature to begin with and a cool greenhouse afterwards. At the flowering-time a minimum temperature of 45° to 50° is necessary.—W.

The Lapageria in the Open.—Lovers of climbing shrubs in favoured situations might do well to try *Lapageria rosea* in the open. This is not to be commended in the case of any but those with specially mild climates, as otherwise the results would be very disappointing. Even in cold districts, however, one has occasionally seen a long shoot which had found its way out of the greenhouse or conservatory trained against a warm wall and giving occasional good results, although the roots being in a warmer place made the growths appear too early. Yet in the favoured parts of the country it will do on a south wall; and last year the writer came across good plants of both the rosy crimson *L. rosea* and the white *L. rosea alba* growing and flowering well on the front of a Wigtownshire house. This was close to Loch Ryan, but it says a good deal for the mildness of the climate and the comparative hardiness of *L. rosea*. There it usually flowers well, and it is certain that there are places along even the North-West of England and the West of Scotland where it might be cultivated in the open successfully and to the gain of the owner.—S. A.

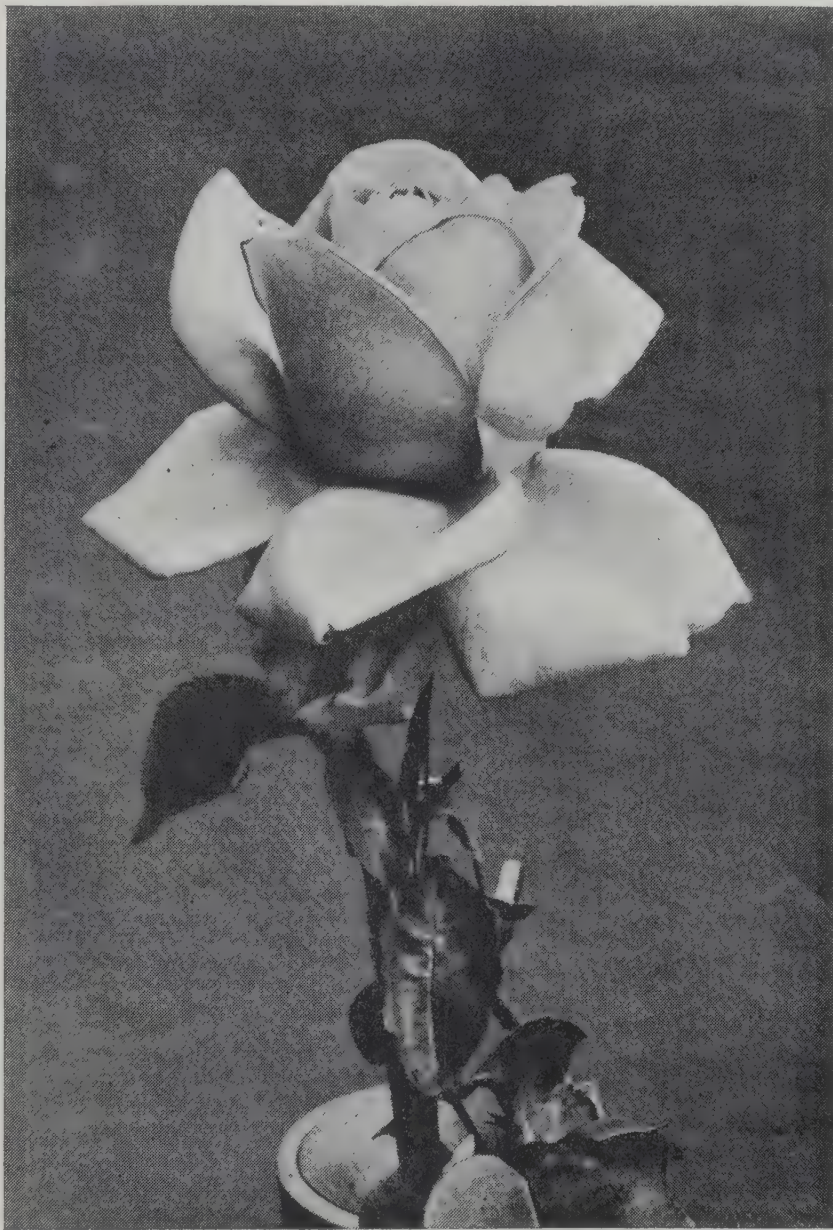
A Note on Parsley.—This most useful kitchen commodity requires a little extra thought and labour just now if it is to be kept in usable condition. The continued wet, followed by cold winds, occasional sleet and touches of frost, retards the growth of the young Fern-like leaves, besides rendering the older leaves unfit through dirt and a slimy form of decay, in addition to which many leaves are turning slightly yellow through maturity or ripeness. To keep up the supply, one of two practices may be adopted. Place hand-lights, cloches, or bottomless boxes with pieces of glass across the top over the plants where growing, or take up a batch of roots and transfer them to a frame or greenhouse. The former suffices in mild winters and where the requirement is not excessive, but the latter is best in severe winters and where it is essential to grow Parsley quickly and plentifully.—C. TURNER.

Olearia Haastii for Sandy Soils.—There are not many kinds of flowering shrubs that will succeed year after year on a dry bank composed mainly of sandy soil. The shrub here named has, however, proved very satisfactory in such positions for many years to my knowledge. There are few shrubs that possess more fibrous roots. I have seen specimens lifted with balls of soil and roots combined as large as the head of the plant. The leaves are small, very closely placed on the branches, and of a dull blue-green colour, with creamy brown on the under sides. The flowers, which are white and numerous, open in July in the South and early in August in the more Northern Counties, and last in good condition for about six weeks.—AVON.

The Poison Ivy.—Your Canadian correspondent, Mrs. Baines of Toronto, whose note appears on page 2 of your issue for January 6, is quite right in warning the public against the poisonous nature of the *Rhus Toxicodendron* wilding, which is so often confused with other vines of a harmless character. I can bear testimony to this fact from a series of bitter experiences in my youthful days. For years I was a victim of this cruel mistaken identity, simply because my parents on the home farm knew no better. They taught me to carefully shun the *Ampelopsis quinquefolia* (Virginia Creeper) that grew along the fences, which they said was Poison Ivy (*Rhus Toxicodendron*), so all this time I was coming in contact with the latter, and, of course, suffered greatly from the effects. Often my face and hands were covered with the watery blisters, and at times my eyes were so swollen that they were nearly shut.—H. HENDRICKS, *Kingston, New York.*

Sweet Peas Too Much Alike.—As one of the small fry in the large number of "down-trodden" quasi-amateur Sweet Pea growers, and one who likes to grow a dozen or two of the best but distinct varieties each year for decoration only, may I be permitted to say that I was most pleased to read the article under the above heading by Professor Biffen in *THE GARDEN* for January 20. Such lists as he refers to are most useful to the

grower, who, like myself, delights to grow the best but is cramped for space. In *THE GARDEN* dated February 3 I notice Miss Hilda Hemus is a little perturbed about Mr. Biffen's article; but as he did not mention the names of any variety or of any raiser, I fail to see why any individual interested in the sale of seed should rush into print to protest against such a necessary article. Mr. Biffen hopes that Mr. Horace Wright, who was a constant visitor at last season's shows, will give your readers an authoritative summing-up of the best half-dozen among the novelties offered this season. Mr. Horace Wright and Mr. Biffen, I am sure, are both well qualified to compile such a list quite impartially. I hope Mr. Biffen's request for the best half-dozen novelties will



HYBRID TEA ROSE MELANIE SOUPERT.

meet with response from Mr. Horace Wright.—H. P. BOYCE, *Bristol.*

FORTHCOMING EVENTS.

February 19.—National Chrysanthemum Society. Executive Committee Meeting at Carr's Restaurant, Strand, 6 p.m.

February 20.—Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster. Lecture at 3 p.m. by Mr. W. Cuthbertson on "New Sweet Peas." North of England Horticultural Society's Meeting at Leeds.

February 22.—Manchester Orchid Society and North of England Horticultural Society's Joint Show of Orchids only at Manchester

February 24.—Chester Paxton Society's Meeting.

THE ROSE GARDEN.

ROSE MELANIE SOUPERT.

(HYBRID TEA.)

THIS is deservedly one of the most popular Roses of its class. It is a favourite with the exhibitor by virtue of its faultless flower, and, owing to its rather vigorous habit, it is the most useful bedding Rose of its colour. In the rapidly-approaching season of pruning it is well to remember that this is one of the varieties that will repay for hard pruning. The colour of the flowers is not easy to define; it has been described as pale sunset yellow, suffused carmine; but even this does not do justice to the indescribable beauty of a youthful flower perfect in form.

THE VALUE OF BASIC SLAG AND BONE-FLOUR.

I AM not sure that the rosarian has yet realised the value of these two excellent fertilisers as aids in the production of quality of bloom. There is a tendency to run after the more expensive compounds, thinking, perhaps because of the high price, they must of necessity be more valuable. But I venture to assert that, given a good trial of basic slag in the lower soil and bone-flour in the upper soil, many would be astonished at the result.

Now these manures are very slow in their action, and should be applied in winter, or at least the basic slag should, and I would advise anyone who is looking for a good lasting fertiliser to apply this at the rate of 6oz. to 8oz. per square yard. Perhaps exception should be made in the case of chalky soils; but on all clayey soils and those containing humus, basic slag is excellent. If trenching is contemplated for any new beds of Roses, work in the slag with the lower spit of soil, adding farm-yard manure also; then, when the Roses are planted, a handful of bone-flour for each bush or tree should be applied just beneath the surface soil. Basic slag should be finely ground in order that it may be of most service. It is very necessary to purchase it from a reliable firm, as many spurious samples are on the market. Sweet Pea growers, also fruit growers, would find it of great value to them. P.

ROSE GRUSS AN *AACHEN.

THIS pretty Rose is classed among the Dwarf Polyanthas, but surely it is nearer the Hybrid Teas. It is comparatively unknown, and I have only seen it in one English list; but it is a charming Rose, well worthy of cultivation. The flowers are large, fully $3\frac{1}{2}$ inches across, double and of rather flat shape. The colour is a lovely chamois yellow in the centre, with pale, almost whitish, outer petals having a suspicion of pink about them. The habit of the plant is bushy and dwarf, excellent for bedding and massing. It is a free and continuous bloomer, and altogether a very pleasing variety. P.

THE GREENHOUSE.

THE CULTIVATION OF THE PELARGONIUM.

A FEW weeks ago I put forward a plea for the more extensive use of these fine flowers in the decoration of greenhouse and conservatory, and promised, with the Editor's permission, to give a few practical details of their cultivation, which does not seem to be very well understood by the present race of gardeners. As the present time is an admirable one for making a start, either with cuttings or autumn-rooted cuttings, I now redeem my promise.

Propagation.—Personally, I prefer to propagate both Zonal and Regal sections in autumn, but they

stronger, say, three parts good loam, two parts leaf-mould, one part sand and a quarter part of wood-ashes. Pot firmly, but not too hard, and set again on the shelf near the glass. Water with extra care until the pots are well filled with roots. In due course a shift will be necessary, this time into 6-inch pots for the strong ones and the 5½-inch size for the weaker growers.

The Final Potting.—A good substantial compost is necessary, but over-rich soil is a mistake, as it causes soft gross wood and huge leaves, with few and badly-coloured flowers. My own practice is to use three parts of the best fibrous loam obtainable, one part leaf-mould, two-thirds of a part coarse sand, and a 5½-inch potful of bone-meal to each barrow-load of the other ingredients. Should the loam be poor, a small quantity of dry horse-manure is added and a good sprinkling

out of the offender. As soon as the flowering pots are well filled with roots, gentle feeding should be administered in a liquid form. Soot-water, ordinary liquid manure, well diluted, and Ichthemic Guano are all excellent, and may be used alternately. About twice a week is often enough to apply stimulants.

After Flowering.—When the plants are somewhat exhausted by months of continuous flowering, less water should be given for a week or two, and then the plants be cut back to within 3 inches or so of the soil. If kept on the dry side, fresh growth will soon be apparent, and by the middle of February or so they will be ready for a little fresh treatment. I have long discontinued the annual potting of these plants, which entails a great deal of unnecessary labour, without any corresponding advantages. My plan gives very little trouble, and I am certain that it gives much better results than the old method. With a pointed stick I loosen an inch or so of the surface soil, which I remove. I then add half an inch of rich fresh compost, such as already advised for the final potting, and then sprinkle a heaped teaspoonful of Thomson's Manure evenly round each plant. A little more soil is added and made quite firm, and the operation is over. Of course, it is necessary to see that the drainage of each pot is in good working order. The plants are carefully watered and set in a temperature of about 60° for a few weeks, and any necessary pinching attended to. By the third week of April fine blooms in abundance are showing, and the plants are then removed to an ordinary cool greenhouse, where they bloom profusely for six months.

Feeding the Plants.—They are, of course, regularly and systematically fed, principally with Ichthemic Guano—a heaped tablespoonful in a gallon of water. In the height of the season this is given about three times a week, but at first twice a week is sufficient. Old plants are good for at least three years and produce far more flowers than young plants, and if treated as advised, the trusses and pips are but little inferior, while the colours are superb.

The Regal Section.—All the foregoing applies principally to the Zonal section, but the remarks on potting, feeding and top-dressing will exactly suit the Regals also. When these latter cease flowering, water is gradually withheld and the plants are removed to a sunny position out of doors, where they are laid on their sides to allow of the wood ripening. Early in September they are cut hard back and set in a cold pit. All through the winter they are kept cool, just sufficient fire-heat being used to exclude frost. Water is also used very sparingly. In February the plants are top-dressed in the manner advised for the Zonals. Subsequent treatment is also much the same, and I find that I am seldom troubled with green fly. Of course, the greenhouse is occasionally vaporised with XL All, but that is all the precaution taken to keep the Pelargoniums clean.

C. BLAIR.

Preston House Gardens, Linlithgow.



FLOWERING SPRAYS OF BUDDLEIA ASIATICA, A BEAUTIFUL WINTER-FLOWERING GREENHOUSE SHRUB. (See page 81.)

can be rooted at almost any time of the year. I put in a large batch of cuttings on October 30 last, and did not lose 3 per cent. of them. However, September, February or March are probably the most desirable seasons for this work. Insert three or four cuttings round the edge of a 4-inch pot, using an open compost of two parts loam, three parts leaf-mould and one part very sharp sand. A shelf in a greenhouse is about the best place to stand the pots of cuttings. On no account over-water the soil at any time, but more particularly before the cuttings are well rooted and during winter.

Potting-Off Young Plants.—From the middle of February to the middle of March is the best time for potting the young plants off singly. Use 3-inch pots for the weaker plants and the 4-inch size for the stronger ones. Make the compost a little

of Thomson's Plant Manure. The pots must be clean and carefully but not over crocked. Make the soil as firm as possible with the fingers, but do not use a rammer. Set the plants in a cold frame in a sunny position, water carefully, and keep close for a few days to induce a rapid start.

After-Treatment.—Pick off all flower-buds as they appear until the plants attain a decent size. One of the mistakes I notice growers very frequently make with these plants is to allow them to grow tall and thin. They seem to be afraid to pinch them; but they may be pinched whenever necessary throughout the growing season. I very often begin the pinching in the cutting pots, and certainly always while the plants are in small pots. Then after the final potting, whenever a shoot grows away from the others and threatens to spoil the shape or balance of the plant, the point is pinched

BUDDLEIA ASIATICA.

AMONG the many species of *Buddleia* that require the protection of a greenhouse during the greater part of the year, there are few to equal *B. asiatica*, either for its graceful appearance, its flowering season, or its delicious fragrance. Although it was in cultivation so long ago as 1874, in some way it became lost for many years. It was, however, reintroduced in 1902 by Mr. E. H. Wilson, who was then collecting in China for Messrs. J. Veitch and Sons, and since then it has proved such a valuable acquisition for the greenhouse that it is not likely to drop out of cultivation again so easily. There are at least two or three forms of this species, of which the plant now cultivated appears to be the best, for it differs somewhat from the plant figured in the *Botanical Magazine*, t. 6323, in having larger flowers with longer and narrower leaves, while the petiole is shorter. Another form is mentioned having a buff-coloured tomentum on the under surface of the leaves. This *Buddleia*, besides being a valuable pot plant, is also an excellent subject for clothing a pillar, when, if possible, it should be planted at the base in a light, rich loamy soil. If given a sunny position it will make rapid growth, which will produce long racemes of white, fragrant flowers in abundance during January and February. After the flowering period is over, the shoots should be shortened back, occasionally syringing the plants with tepid water; this will induce the plants to break freely. During the growing season the plants will derive much benefit from frequent applications of manure-water. Cuttings inserted in sandy soil during March or April root readily, and when potted on into 6-inch or 7-inch pots will form useful plants from 3 feet to 5 feet high; these will commence to flower soon after Christmas. *B. asiatica* is a native of the East Indies and the warmer parts of China. It is also known under the name of *B. Neemda*. W. T.

CAMELLIA JAPONICA GRANDIFLORA.

THIS beautiful form of *Camellia japonica* when better known should prove a great gain for conservatory decoration, appealing to those especially who dislike the *Camellia* in its stiff double form. This plant differs from the old single white form of *C. japonica* in having a double row of petals. Moreover, it possesses beautiful undulated and crinkled petals; whereas in the old form the petals are smooth and flat, with entire edges. There is also a great difference in the size of the flowers; in *grandiflora* the flowers are from five inches to six inches across, and have been described as six inches to seven inches across, which is quite possible with strong plants. The plant from which the illustration on page 82 is taken is a young one in a 7-inch pot. It is certainly an exquisite flower with its pure white petals and great cluster of golden stamens. The flower has great substance and remains fresh for a week or more. The plants were imported from Japan, and even in the Japanese lists it is described as being scarce. There appears to be no previous record of it in this country. J. C.

TREES AND SHRUBS.

WHEN AND HOW TO PRUNE ORNAMENTAL SHRUBS.

(Continued from page 71.)

Clematises.—February is a good month to prune *Clematis Jackmanii*, *C. lanuginosa* and *C. Viticella*, together with their numerous varieties; but *C. florida* and its forms must be left until the flowers have fallen. The *Jackmanii* varieties require severe pruning, and the others moderately heavy pruning. *C. montana* must not be pruned until after it has flowered. March is a good time to prune coloured-stemmed Willows, *Cornus*, &c., which are grown for winter effect. As a rule, the harder they are pruned the better is the colour of the bark the following winter, for the shoots are more vigorous from hard-pruned plants. Where plants like *Paulownia imperialis* and *Ailantus glandulosa* are grown for the sub-tropical effect of their large leaves, the plants should be cut down almost to the ground in February. Many shrubs, such as most of the *Philadelphuses*, *Ribes*, *Diervillas* and *Cotoneasters*, require no regular pruning, but may do with thinning and shaping occasionally. An exception must, however, be made with the dwarf *Philadelphuses* as typified by *P. Lemoinei*, for they thrive better when the old wood is cut away as

the work, for new growth is then soon formed. In the case of straggling *Rhododendrons* which have to be cut back, it is sometimes advisable to sacrifice the flowers in order to be able to cut the branches back in April, so that the longest possible growing season may be secured. Bamboos pay for having the older growths cut out right to the base each year. April is a good time for the work. W. D.

THE FLOWER GARDEN.

STONE AND BRICK PAVEMENTS IN GARDENS.

BESIDES obvious uses for plain pavings of flags, bricks and strong tiles, places often occur about carefully-planned gardens where a piece of more ornamental pavement is desirable. It may be the floor of a summer-house or garden pavilion, or the space surrounding a sundial or some other important central point in a garden design, or where important paths cross, and, most often, a platform for a seat, raised by a shallow step above the path or grass-level. But wherever such an opportunity occurs, it gives scope for the very interesting use of brick and stone, or of varied stones in combination. In the writer's locality there are two kinds of stone,



A WALLED ROSE GARDEN WITH STONE PATHWAYS.

soon as the flowers have fallen. Lilacs which appear to be weakening may be improved by having sucker growths and weak inside wood removed in February, and again in June or July. Autumn-flowering Heaths should be cut over during winter. **Evergreen Shrubs.**—When evergreens have to be pruned severely, April is the best time for

one a hard sandstone that can be chosen in the quarry, either in blocks suitable for building or in slabs, that may be set flat for paving or on edge for kerbing. Much of it can be dressed to a thickness of 2½ inches, when, used on edge, it works in well for the guiding lines of a design that is filled in with a "pitching" of the other stone. This occurs in small loose stones, on or just beneath

the surface of the ground. They contain a good deal of iron, are nearly black in colour, and a large proportion of them have one good end, which, to take an average size, would be 3 inches long and three-quarters of an inch wide, while the stone would be about three inches deep. The surface is of a fairly smooth, water-washed character. The sandstones, some ten inches deep, being firmly put in, the spaces between are nearly filled with sand, and it is an easy matter to set the ironstones, first carefully graded to size, when the whole is rammed to an even level.

Where stones can be collected from seashore shingle, there will be a wider scope for ornamental treatment, for on most shingly beaches stones nicely matching in size and of many colours may be collected. It is a delightful occupation for children, and capital eye-training both for estimation of size and perception of colour. Stones of white, pale and deep yellow, cool grey of one or two shades, and nearly black colourings may generally be found. Besides the many varieties of pattern with rectangular or circular bases or other symmetrical form, a pavement in which the compass points are shown is an interesting feature in any garden.

G. J.

SWEET PEA NOTES.

Varieties.—In a recent issue of *THE GARDEN* Professor Biffen, in a most kindly letter, suggests that I shall give extended consideration to varieties, but it really seems impossible to do so in the limited space at my disposal. In the present season the number of novelties offered for the first time is immense, and it would demand at least three issues of *THE GARDEN* fully and adequately to deal with them, and such an amount of room cannot possibly be given. The differences between some of the new ones and others that have been on the market for a season or two are infinitesimal; but the introducers, if no one else, can see them plainly enough, so someone is happy. I maintain my offer to make selections for readers who will write to the Editor, and will devote as much space as possible to varieties after the shows and trials are over for the season, when one will, obviously, be in a better position to speak authoritatively on the subject.

Outdoor Sowing.—Broadly speaking, it is too early to consider sowing seeds out of doors yet, but there can be no doubt that where the soil is naturally light and warm, seeds sown now will produce superior plants to those sown a month hence. The advantage lies more, of course, in the root development than in the top growth, and to ensure the full benefit from this, the sowing must be in a deep, friable medium, or the roots will not extend as they ought to do. Let the seeds be set 3 inches apart on a flat, level, firm base, and do not cover with more than an inch of soil. It will be wise in most instances to thickly coat all seeds with red lead, or the mice may take more than a fair share of them.

Sowing Indoors.—Between the present date and the end of the month is an excellent time for sowing in the greenhouse or gently-heated frame, and it is well within the bounds of possibility that amateurs, whose conveniences for bringing along the plants are usually exceedingly limited, will have better success with these than with those from seeds sown in January, for the simple reason that they will not have so long to keep them sturdy and strong under glass. For autumn sowing I give the preference to 5-inch pots or boxes of good depth, and for spring I should favour the latter or 3-inch pots. Depth is not, however, as important now as in the autumn, because the plants will not have to spend nearly as long a period in the pots or boxes. As a compost take three parts of good loam to one part of refuse manure, and one-



THE NEW CAMELLIA JAPONICA GRANDIFLORA (MUCH REDUCED).

(See page 81.)

eighth or one-tenth of a part of sharp sand to ensure the essential porosity. For white or cream coloured seeds, and also for those that are wrinkled and spotted, surface the compost with sand and press the seeds into it, making no attempt whatever to cover them in. The ordinary seeds may be covered with soil to a depth of about three-quarters of an inch. In 3-inch pots place one seed, while if boxes are requisitioned allow from 4 inches to 5 inches in all directions. The pleasant temperature of an ordinary greenhouse or heated frame, with regular moistness of the soil, will favour germination, and later the plants should be grown as hardily as possible. The chipping of all seeds is unnecessary; if the seedlings do not appear in reasonable time, rake out the seeds that are dormant and chip them.

HORACE J. WRIGHT

WHY DO SNOWDROPS FAIL IN SOME SOILS?

WE so frequently hear that Snowdrops will grow anywhere that it seems almost incredible that they will not do so, and we are apt to associate the failures with some defect in the manner of planting. Yet the Snowdrop has a curious way of refusing to become established, and of dying out gradually, however carefully it is planted and however congenial appear the conditions. The writer knows of several places where it was planted in quantity in apparently the best positions and under the same conditions in which it thrives in the land almost adjoining, yet the bulbs failed to become established, and either died off in a wholesale way or gradually dwindled away.

A recent instance of this failure came before me lately, and with a view to endeavouring to ascertain the cause, I turned up a number of articles on the subject of the flower and its ways. I fear the result has been unprofitable, as there are evidently few facts to go upon, save the one that the Snowdrop will not grow everywhere. We find, however, the statement made by one of the best authorities on the cultivation of such plants, the late Mr. F. W. Burbidge, that "double Snowdrops often thrive where the singles die off, either by reason of the fungoid disease peculiar to them, or from some other unknown cause, and possibly lack of moisture." As Mr. Burbidge says, in addition, the reverse is often the case, and the doubles die out while the singles thrive. It is a little difficult to adopt the theory that the fungoid disease may be the cause, as there appears to be no reason why it should not attack the double-flowered plants as well as the singles. Nor should lack of moisture have anything to do with it, and one has come to the conclusion that the cause is an unknown one. Both forms usually do well in the same soils, and they also occasionally fail. Still, the notice of those who cannot succeed with the single Snowdrops may well be drawn to the point, as one had better have the double *Galanthus* than none at all, and, *vice versa*, better have the

single than the charming Snowdrop unrepresented entirely. There can be little doubt that Snowdrops are better in grass than anywhere else, and that when they are planted elsewhere they should be carpeted with some low-growing plant, preferably one which is evergreen. Under such conditions the plants seem healthier and are also cleaner, there being less risk of the flowers being disfigured by mud during heavy rains than when on bare soil. They look happier also when among roots than elsewhere, and the beauty and vigour of Snowdrops under trees have frequently been remarked upon.

The late Mr. James Allen, who was *facile princeps* in the culture of the Snowdrop, preferred a soil of about one-half of yellow loam and one-half of unsifted river grit with some leaf-soil added. A sloping bank, shaded by trees, was what he recommended

as an ideal position. Then he found that *Galanthus Elwesii* did not do well in close, retentive soil, and that *G. latifolius* and *G. caucasicus* preferred gritty loam. He did not use manure.

One question which may call for consideration is the effect of lime on the plants. Is it possible to make a soil suitable for the Snowdrop by the addition of lime, or is this material inimical to the welfare of the plants? So far as my own experience goes, the presence or absence of lime in the soil does not matter. Still, an excess of lime may be decidedly injurious, although this is not likely to be the case in all the instances of failure which

obtain some idea of the factors to be studied. I expect we shall each have "to dree his own weird," yet the exchange of thought will be profitable at least.

Dumfries. S. ARNOTT.

COLOURED PLATE.
PLATE 1445.
A NEW RED CURRANT.

COMPARED with flowers, the introductions of new fruits are few, and even then the varieties are not

coloured plate being quite typical of the variety in this respect. The long bunches of fruit are of excellent colour, and the large berries particularly firm, so that fruits will travel well without injury. The spray from which the coloured plate was prepared had two postal journeys, entailing about one hundred and fifty miles, and then arrived at its destination quite sound. The flavour is brisk and well defined, and the habit of the bush sturdy and upright. This variety can easily be picked out from others by its extra dark foliage. It was raised by the well-known firm of Messrs. H. Merryweather and Sons of Southwell,



A QUIET WOODLAND SPOT WHERE SNOWDROPS THRIVE.

have come under my observation. Another point worth considering is whether the bulbs have not suffered by being dried and kept too long out of the soil before replanting is performed. This is not natural for the Snowdrop, and may possibly account for failures the first season, although it is only possible, and not very probable, that this may have had something to do with the losses in subsequent years. The whole question is so full of difficulties that it would be foolish to enter upon it with any feeling of dogmatism. It is one on which there is room for a difference of opinion, and it would be a boon indeed to many who love the Snowdrop, but cannot grow it, were they to

always so distinct or meritorious as we would wish. This impeachment cannot, however, be brought against the new Red Currant The Southwell, a coloured plate of which is presented with this issue. Although previous to its introduction there were several varieties of sterling merit in existence, there is ample room for this new-comer, which has several excellent points in its favour. One of its characteristics is that it flowers considerably later in the spring than other Red Currants; consequently the blossoms are less likely to be injured by frosts, a by no means unimportant point. It is also a very free-fruiting Currant, the spray which is represented in the

Notts, to whom we are indebted for the introduction of Bramley's Seedling Apple and, more recently, the Merryweather Damson. Fortunately a good many hybridisers are now working on our edible fruits, and doubtless ere many years have passed the varieties of Apples, Pears, Plums, Cherries, Gooseberries, Currants and other kinds will be very largely added to. Although a great deal of improvement has already been made, there is still an ample field available for those who care to take up the work. The spray of Currants from which our coloured plate was prepared was kindly supplied by Messrs. Merryweather.

FLOWERS AND FRUITS OF THE EARLY EIGHTEENTH CENTURY.

THE first quarter of the eighteenth century was a period of transition, and this in two ways. The "formal" style, which was probably at the height of its fame in the days of William and Mary, was beginning to give way to a freer and less stiff style, and a great influx of new plants was on the eve of taking place. How many these were can be easily seen by comparing Miller's 1731 edition of his Dictionary with the edition edited by Professor Martyn of Cambridge in 1792.

What, then, were the chief flowers and fruits that were at this period to be found in English gardens? In the larger ones nothing was more generally popular than the orangery. No garden of any pretensions was complete without one. The variety which was considered the best adapted for our climate was the "Sevil-Orange," "as well for the beauty of its leaves as the goodness of its fruit." It seems that one of the great centres for rearing young trees was Genoa, and it is interesting to note that in all treatises and articles dealing with Orange trees, "how to manage them after they come from foreign parts" occupies a considerable space.

Another characteristic of some of the larger gardens was the Vine. Either in vineyards or against walls Vines were very frequently wet with. Miller, in his "Gardeners' Dictionary" of 1724, enumerates no fewer than forty-eight varieties, which shows its popularity at this epoch; but I presume, from a reference in Johnson's "History of English Gardening," that the former of these methods was fast passing out of fashion. He says that the celebrated Thomas Fairchild was one of the latest English cultivators of a vineyard, of which he had one at Hoxton as late as 1722. The white Muscadine and the white and red Frontinac were the varieties usually recommended.

When we come to other fruits, we find that the most prized were Pears. I judge this by its position in "The Retired Gardener" of Carpenter (1717). Summer Pears, August Pears, Pears for every month up to March are enumerated. St. Germain, Messire Jean and Russelets were three of the best. Peaches, Nectarines and Plums were thought much of and largely grown. Some, such as Queen Claudia (our Green Gage) and Newington (Nectarine) are still with us. Apples loomed large. The most famous was the celebrated Golden Pippin. There were Cherries and Apricots, although these latter were limited in their varieties. One of the most interesting facts is connected with Strawberries. There were no hybrids known, and the modern plethora of varieties was limited to three—Scarlet, Wood and Hautboy, and these are, of course, species.

I now come to the flowers, and to get a correct idea of those which were most commonly met with

I do not think I can do better than go to John Laurence's "New System of Agriculture, being a Complete Body of Husbandry and Gardening" (1726). Laurence was a clergyman, who first had a living in Northamptonshire and then moved to Bishop's Wearmouth in the county of Durham.

he may be looked upon as a safe guide. Book V. is devoted to the flower garden, and here he gives "a complete Catalogue of Flowers great and small, perennal or annual usually known or propagated in England either in the naked Ground or Hotbed."

His divisions are (1) Perennal flowers of the tallest size; (2) Perennal flowers of the middle size, whether from bulbous roots or offsets; (3) Reptiles, or the lowest vivacious flowers; (4) Annual flowers from seed; (5) Annuals to be sown in hotbeds.

In No. 1 we have Hollyhocks, Sun-flowers, several kinds of Lilies and Martagons, Canterbury Bells, Foxgloves, *Campanula pyramidalis* ("When this plant is set in a pot supported with sticks beautifully painted it may become the Closet or the Chamber of the nicest Lady" — Laurence) and Tuberoses. These last must have been a very popular plant and very largely grown, as "the flowers blow successively one after another, by which means it continues a long time in bloom." In No. 2 we get Columbines, Sweet Williams, Iris, Fritillarie, Narcissus or Daffodil, Crown Imperials, Ranunculus, Carnations and Pinks, Peonies, Tulips, Stock-Gilliflowers, Hyacinths and Anemonies. In Laurence's directions the greatest spaces are given to the Carnations, Tulips and Narcissus (*Polyanthus*), but Hyacinths and Anemonies must have run them very close as everybody's flowers.

The "reptiles" or lowest of the vivacious flowers are by no means restricted to those of creeping habit, for among them we have such low-growing subjects as Daisies, *Polyanthuses*, Violets, Croci, Pansies and Auriculas. The Auricula-grower of to-day will be interested to learn that much care must have been bestowed on the cultivation of these flowers, for the cultivator is recommended to "complement them with sheds and shelves of boards one above another." Double and striped varieties were much sought after, and the "beautiful powder" was much appreciated. In No. 4, hardy annuals, we have Snapdragons, Lark-Heels, Annual Stocks, Sunflowers, *Nigella*, Marigolds, Poppies, *Candia-Tufts* and, what will strike us nowadays as curious, Scarlet Beans. This is our modern Scarlet Runner, and was at one time greatly valued, so much so that it was "introduced out of the Kitchen into the Flower garden" (Laurence).

In the last division of half-hardy annuals we have French and African Marigolds, *Amaranthus* (Cocks-comb), Balsams and Marvel of Peru, by some called "The Wonder of the World." One could make these lists much longer, especially if one were to include plants that were just becoming known and grown and if one were to take

in the flowering shrubs like Lilacs, Jessamines, Roses, Sena-trees, Laburnums, &c. Enough has been said to give readers an idea of the flowery and fruity contents of early eighteenth century gardens.

JOSEPH JACOB.



THE NEW PERPETUAL-FLOWERING CARNATION TRIUMPH.

(See page 87.)

He held a high position in horticultural circles, and as "the contents of his works are evidently the results of his own observations, made during the experience of many years' practice" (Johnson's "History of English Gardening"), I think

GARDENING FOR BEGINNERS.

INDIAN OR CHINESE AZALEAS.

AZALEA INDICA and its varieties, collectively known as the Indian or Chinese Azaleas, are unquestionably among the most beautiful of hard-wooded greenhouse flowers. Moreover, they are evergreen, in this way differing from the hardier race known as Ghent Azaleas. The flowering season of the Indian Azaleas is from late autumn until early summer, and during this time blossom may be had almost continuously. Unfortunately, the plants do not always flower as freely as expected; indeed, one sometimes hears complaints of them not flowering at all. Now, this is invariably due to the wood not being well ripened in the sun in the summer months. It is quite a common error among amateurs to keep their Azaleas in the greenhouse during summer, possibly under the shade of Palms or in some overcrowded position. Under such circumstances the plants never have an opportunity to ripen their wood, and a poor show of flowers is the result.

Growers who succeed best in the cultivation of these Azaleas keep the plants in the greenhouse from about November till early June. For the remainder of the year the plants are either stood in cold frames with the lights off or plunged in the open. In Southern counties it is quite safe to turn the plants out of their pots and plant them in open beds, and there they may remain until potted up in the autumn for the embellishment of the greenhouse in winter. The repotting of Azaleas in the case of those plants grown entirely in pots is rightly carried out in the spring of the year when flowering has ceased, but before new growth is far advanced. As this season will soon arrive, it is a suitable time to give a few explanatory notes on how the work should be performed. A very good potting soil may be made from peat, fibrous loam, leaf-soil and silver sand. One-half the compost should be peat, and the other half may well be made up with equal parts of the remaining constituents. Remove all the crocks from the plant to be potted on, and loosen the ball of soil with the aid of a pointed stick.

In potting it is most important that the soil should be rammed firmly. It will not do to pot Azaleas in a peaty soil as one would pot a Carnation or a Chrysanthemum. The Azalea will require more ramming than either, and there is very little, if any, fear of getting the soil too firm. It should also be borne in mind that Azaleas resent deep potting. After potting it is well to keep the plants close for a few days and to syringe them overhead, especially on bright mornings. Thrip and red spider are the two worst enemies to contend with, and both may be kept in check by the judicious use of the syringe and an occasional spraying with an insecticide. The Azalea does not require high feeding, and may be satisfactorily grown without the aid of stimulants, at the same time a little diluted soot water and liquid cow-manure will prove beneficial just before flowering.

On this page is illustrated a fine plant of Deutsche Perle, pure white, and probably the finest of all varieties. It is a capital sort for the amateur, since it forces well and flowers early. A few days after potting up, the plants should be

given as much light and air as possible, finally giving them the hardy outdoor treatment already recommended.

SPARTAN.

TRANSPLANTING SEEDLINGS.

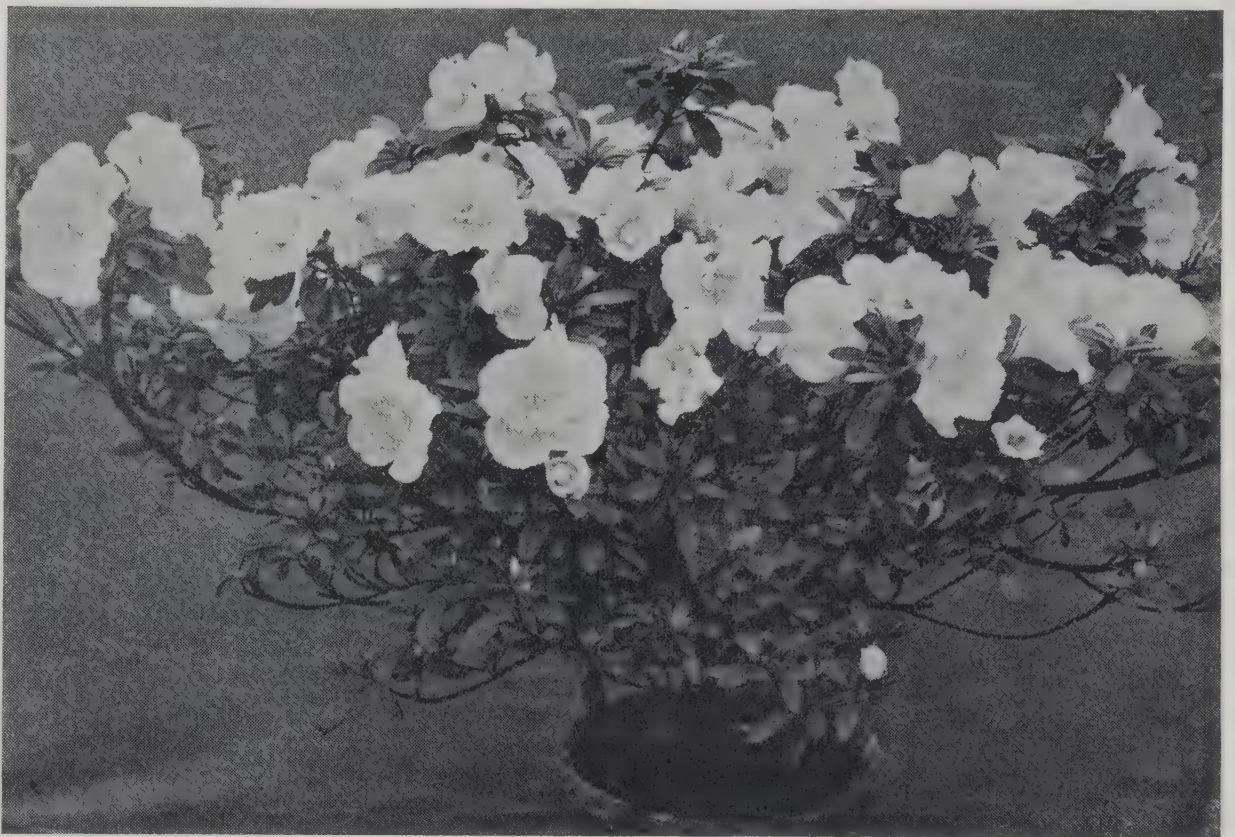
THE season has once more arrived when it is necessary to transplant many thousands of seedlings, even in a single garden of moderate size. The work is not hard, but trying, sometimes so much so that the worker becomes impatient and the seedlings are not properly dealt with, and very unsatisfactory results follow. All seedlings grown in pots, boxes or pans under glass are liable to be much drawn up if not carefully treated during their earliest stages of growth. If they are, it is a difficult matter to transplant them without doing damage to the long, delicate stems. Great care

and to prevent this happening, and for the general well-being of the plants, early transplanting is advisable. Procure some clean pans, well drain them, and then three-parts fill them with finely sifted loam, leaf-soil, peat and sand. Put some sand on the surface, water thoroughly, and with two small pointed sticks transfer the seedlings, while the latter have only the two seed leaves, to the prepared pans. Both soil, sticks and seedlings must be kept moist while the work is being done. Just press the tiny roots into the surface of the soil, and shade from bright sunshine afterwards.

SHAMROCK.

THE GREENHOUSE GRAPE VINE.

MANY amateurs who possess greenhouses have the ambition to grow a few Grapes in them in



AZALEA DEUTSCHE PERLE, A CAPITAL PLANT FOR THE AMATEUR'S GREENHOUSE.

must be taken to press down the soil very gently around the roots only, and not against the stem at all. Stocky seedlings with plenty of fibrous roots, such as Asters and Marigolds possess, are easily and satisfactorily transplanted. Care is needed in dealing with seedlings of Stocks, young Cauliflowers and others of a similar growth. The majority of annuals should be first transplanted 2 inches apart; but Marigolds, Phlox Drummondii, Ageratum, Petunias and Salpiglossis require a space of 3 inches each way between them. From these quarters the seedlings should be transferred to the nursery beds prior to being planted in their flowering borders.

The compost, which must be rather light and sandy for the first transplanting of annuals and similar kinds, should be passed through a quarter-inch mesh sieve; for early seedling vegetables through a half-inch mesh sieve. Tiny seedlings, such as those of Begonias and Gloxinias, must be dealt with in a special manner. The seedlings are liable to damp off wholesale while very small,

in addition to the usual flowering and foliage plants grown in such structures. For the benefit of the pot plants a certain amount of artificial heat must be maintained during the winter and spring months. This heat induces early growth of the Grape Vine, and care must be taken to secure for the young Vine shoots all the light possible and to avoid undue crowding of the shoots by timely disbudding. Disbudding means removing, when about one inch long, all young shoots, except one, from each spur on the Vine-rod. If the embryo bunch can be seen in a shoot, retain that one; but the strongest shoot is generally the best. The Vine-rod is usually too close to the roof glass; it should be at least 15 inches below the glass. If the wires are fixed too near, the Vine may be looped to them by stout twine. Syringing will not be necessary, as there will be sufficient atmospheric moisture in the house owing to the presence of the pot plants. Ventilate without creating a direct draught upon the young shoots.

B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Hyacinths.—These should now be showing their flower-spikes in the majority of cases, and will be greatly benefited by occasional applications of liquid manure-water, properly diluted. Elevate the plants near to the glass, so that the foliage advances sturdily, and place a neat stake to each plant.

Aspidistras.—The present is a good time for dividing and repotting any plants that have become pot-bound. Excellent plants for decorating may be had by potting the divided portions into 5-inch pots. Water carefully for a time, keeping the plants in a brisk, humid atmosphere, and, if possible, plunge to the rims of the pots in a mild hotbed.

Bedding Plants.—Cuttings may now be taken of *Iresine*, *Mesembryanthemum cordifolium* variegatum, *Ageratum* and *Lobelia* from the stock plants. Insert in a fairly fine sandy soil in either pots or boxes, and place in a warm house.

Edging Plants for Greenhouses.—These will need potting or increasing. *Isolepis gracilis* does well in a cool house. Old plants will need dividing, potting nice young pieces into 3-inch pots. Take cuttings of *Panicum variegatum*, which succeeds best in a warmer structure. *Abutilon vexillarium* is a good plant for a cool house; so also is *Nepeta Glechoma variegata*, while *Tradescantia zebrina variegata* and *Pilea muscosa*, the Artillery Plant as it is commonly called, succeed well both on the stages in the shingle or underneath the stage in the intermediate or stove house.

Cyperus alternifolius is a most useful plant and very accommodating. This may be increased by cutting off the stem about an inch below the umbel of leaves, just shortening back the tips of the latter and inserting singly into well-drained 3-inch pots in a sandy compost, when young plants will soon be formed.

Begonia Rex.—The beautiful varieties of these may now be increased by laying the leaves on a pan of sandy soil or on the fibre in the propagating-pit, first cutting through the ribs of the leaves in a few places and covering with a little silver sand, when small plants will be formed that can afterwards be potted up.

Begonia Gloire de Lorraine.—Take cuttings of these as soon as possible and strike them in a warm pit. These, too, may be increased by leaf propagation if cuttings are not plentiful.

Peach Trees.—Admit air cautiously to houses containing trees that have started into growth, especially when cold winds prevail. Disbudding of the earlier-forced ones will now need attention. The two chief objects to be kept in view when doing this work are judicious thinning of the growth and preserving a well-balanced tree for next season. Disbudding should always be done gradually, so that no check is felt. Commence first by removing badly-placed shoots.

Vines.—Early Vines will need considerable attention. Thinning of the weakest shoots from each break should be carried out before they get too large, selecting the one with the most promising bunch. I do not advocate tying down the shoots to the trellis until after the flowers are set, as the maximum amount of light ensures a freer set and there is less risk of breaking. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Box Edgings.—I make a practice of trimming the greater part of the edging of Box in weather when no other outdoor operations can be performed. Any portions that have become blank through plants dying since the last trimming should now be made up. Edgings of other plants are likewise cut into shape at this time.

Ivy.—This also is shear-pruned in the present month. It never needs to be so severely cut as to be bare, but sufficient leaves close to the walls remain to retain an even greenness. Ivy permitted to get rough through inattention should not be pruned now, but in summer, when, no matter how hard back it is cut, new growths are pushed out in the course of a few weeks.

Root-Pruning Shrubs.—Where the roots of shrubs, either single specimens or in hedges, encroach on flowering plants and were not cut in last autumn, the present time is very suitable for the purpose. It is the better way to keep the roots within bounds from the first; but even where this has been neglected, it is possible to root-prune the one half without the plants operated on showing any bad effects.

The Rock Garden.—The coarser-growing occupants may now be safely reduced in size to permit those which are less vigorous to extend. Most of the first-mentioned can be reduced by pulling pieces off, when a less trim appearance results than if they were neatly cut in. Pieces here and there may also be picked out of the central portion of such things as Cushion Pinks, Mossy Saxifrages and such-like, a slight dressing of sifted compost over everything completing operations.

The Bog Garden.—*Primula cashmeriana* and a few other things are now well on the move, and the surface of the bog should be cleaned of seedling weeds and material that has gathered during winter, while the stronger-growing plants should be confined to the positions allotted them. Bare parts should be slightly dressed with some light material. Bamboos do well in wet parts, and appreciate dressings of cow or sheep manure.

Shrubs for Decoration.—A selection of flowering shrubs is of much value at this season for vase furnishing, the Flowering Currants being good examples. We cut lengthened shoots of them and stand them in a hothouse in water till the colour shows, when they are used, opening beautifully in the vases.

Grass Verges.—An opportunity should be taken shortly to straighten lines and regulate curves. Where the edges are worn, the parts should be lifted 1 foot or so back and brought forward, and new turf brought in to make up the space left bare, or a few grass seeds may be sown after filling up to the level with soil. Patchy pieces of lawn should be dressed with finely-sifted compost, and later, should no grass appear, be sown with fine grasses.

Weedy Walks.—Grass has grown freely on gravel paths during winter, and where the walks are kept clean by hoeing, they must now be carefully hoed, left to dry and as carefully raked. Parts where only a few weeds have obtained a footing will be cleaned as effectually and with less labour by hand picking. R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE TOWN GARDEN.

The Weather.—The mild, damp weather which prevailed during the depth of winter caused buds of Roses and many kinds of plants to grow prematurely. The recent frosts will not have done any serious harm to such buds, and they will now retard buds of all kinds, which will prove beneficial.

Flower - Borders.—Examine large-flowered Daisies, and if soil or sand, generally caused by earthworms, be found in the centres, remove it and free the plants, as if left the plants would be seriously injured. Continue to dig the soil between the clumps of plants, and, if procurable, put in a liberal quantity of well-rotted manure. Carefully remove some surface soil from around Hollyhocks and replace it with rotted manure, and, to prevent slugs doing any damage, scatter some coal-ashes on it. Pick off faded leaves from tufts of Sweet Williams and surround the latter with ashes, as slugs are so fond of these plants. Trench and manure ground for Gladioli. Do not handle bulbous or other plants while they are in a frozen condition. Divide old roots of Michaelmas Daisies.

The Shrubbery.—Immediately after a frost has gone out of the soil examine all cuttings of shrubs inserted last autumn, and firmly tread down the soil around each one. Frosts lift cuttings and leave them loose in the ground. Plant *Laurustinus* in borders near the edge of the lawn; they are charming flowering shrubs, and if given plenty of room make neat, bushy specimens. Plant standards of the Flowering Cherry in shrubberies. The Flowering Currant is a capital plant for growing in borders on the north side of a fence or low wall. Put in plants now. Surface-dress borders under shrubs with loam and manure mixed; it is better than digging and damaging the surface roots.

The Vegetable Garden.—Trench all the soil possible in this garden. Break up the subsoil, but leave it below. Leave the top portion in a lumpy state at present. Sow seeds of Broad Beans, such as Beck's Green Gem and Mazagan, in rows 18 inches apart. Sow on a warm border round-seeded Peas. If mice or rats are troublesome, damp the seeds and roll them in red lead prior to sowing them. Watch the Broccoli plants and place a few leaves over the flowers to protect them from frost. Remove decaying leaves every week, as if left they soon become objectionable. See that Beet, Carrots and Turnips stored in trenches are safely covered from severe frosts. Be equally watchful in regard to Potatoes.

The Fruit Garden.—Stake newly-planted trees. Mulch with half-rotted manure if not already done. Burn all prunings. Make good the defective labels.

The Greenhouse.—*Aspidistras* which have filled the pots well with roots must now be repotted. Divide old plants if the cultivator desires to increase the stock. Fibrous loam and leaf-soil in equal proportions, with coarse sand, form a suitable compost. Warm all soils used for the potting of plants generally. Keep the young tips of Rose shoots away from the roof-glass. Fumigate or vaporise if green aphides are troublesome. Put on flowers of sulphur if mildew appears on the Rose leaves. Water plants during the forenoon.

The Garden Frames.—Pinch off the points of *Calceolarias* to cause side shoots to grow. Sow seeds of Petunias and Pansies. Sow early Brussels Sprouts in a box. Bulbs must be freely ventilated. TOWN GARDENER.

NEW AND RARE PLANTS.

ONLY the following three plants were granted awards at the Royal Horticultural Society's exhibition held on February 6.

FIRST-CLASS CERTIFICATE.

Odontoglossum Merlin.—One of the most beautiful *Odontoglossums* that have been shown for some considerable time. The flowers are of perfect form, and nicely set upon a well-built spike. The parentage of this charming variety is unknown, but it has the appearance of a remarkably fine *crispum*. It is blotched purplish brown, and the perianth is nicely waved. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

AWARDS OF MERIT.

Carnation Triumph.—We believe there are two *Carnations* of the Perpetual-flowering class bearing the above name, one being of British origin, the other American. That now referred to originated on this side of the Atlantic, having been raised by Mr. Engelmann, Saffron Walden. It is of crimson-scarlet hue, with just sufficient of the fire of the latter colour to render it bright and effective. As shown, the flowers were of medium size only; and while we were not strongly impressed with its petal quality or substance, we were distinctly pleased with its perfume, which was unmistakably that of the Old Clove. Exhibited by Mr. C. Engelmann, Saffron Walden. For illustration see page 84.

Odontoglossum Memoria Lily Neumann.—A robust and free-flowering variety, judging by the vigorous flower-spike shown, carrying twelve fully-expanded flowers of good size. Both petals and sepals are heavily blotched chocolate red, so as to almost cover the flower. The petals are fringed white, with just a suspicion of purple. Shown by J. Gurney Fowler, Esq.

NOTES ON RECENT NUMBERS.

Winter Jasmine (page 30, January 20).—Useful as this fine winter-flowering shrub is when trained on a wall or fence, I always wish to see it on some very steep, wild rocky bank, where its habit of flinging itself about and trailing downward would be displayed to the greatest advantage. It is also charming when grown in some wild brake among stiff, twiggy bushes, such as Blackthorn and Hawthorn, which give it both support and protection.

Shrubs Under Deodar (page x., January 20).—I have some recollection of seeing ground under a large Deodar well clothed with *Berberis Aquifolium*. It grew right up to the trunk of the Cedar and had the appearance of being self-sown.

White Rose for London (page x., January 20).—The rugosas are among the best Roses for London gardens; therefore the fine hybrid *Blanc Double de Coubert* is a sure success. Of the good kinds that have rugosa for one parent, it appears both in habit and constitution to be one of the nearest to the type. The remarkably bold, deep green, polished leaves, rather exaggerating the already good qualities of the rugosa foliage, would be desirable even without the bloom; but, in addition, the flowers are some of the best of their kind, and are of a singularly pure, almost bluish, white, a colour that with perfect truth may be called snow white.

Fuchsias (page xii., January 20).—Though the modern *Fuchsia*, with its large size and widely

inflated petticoat, is, no doubt, a showy thing, yet for a purer type of beauty of form and for a special kind of attractive charm one must go back to the earlier kinds, rather than look for these desirable qualities among their descendants. Nothing can be prettier, either as plants in vases or for other ways of outdoor use, than the fine old single white and scarlet *Mme. Cornellison* or the even more fully-bloomed *Delight* of the same colouring, raised, I believe, by Messrs. Cannell.

Snow and Seeds (page 42, January 27).—This is a very useful piece of knowledge, viz., that the seeds of alpine and of many other hardy plants, if sown in January or even earlier, either in the open ground or in pots or boxes out of doors, when for some days or any length of time they have a covering of snow, will "stratify" and germinate much more quickly. Many years ago I learnt it from Mr. Correvon, the distinguished botanist of Geneva, and have always treasured it as a valuable rule of garden practice.

Roses and Clematis on Fence (page 45, January 27).—In this note the fence in question is, no doubt, some frontier of dressed garden ground, the kinds of *Clematis* being those with large flowers and the *Roses* among the showiest; but, further away, on some quite rough fence, effects perhaps less brilliant, but with quite as much charm and interest, may be gained by using the type *Clematises*—*montana*, *Flammula*, *paniculata*, *graveolens* and the native *Vitalba*—with the single and half-double forms of rambling *Roses*. Of these, *Evangeline*, of American origin, is singularly beautiful. The flowers are single and something like a very large Dog Rose of firmer substance, and are borne in generous terminal bunches. G. J.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

(Continued from page 68.)

Selecting and Planting the Trees.—To a novice in the business my advice is to entrust the work of planting and supplying the trees to a nurseryman of a good standing. But to those who claim to have some practical knowledge of the work and wish to carry it out themselves I would say, Select your own trees, and see that the stems are straight, the bark sleek and likely to be responsive to easy and free expansion, not hide-bound and hard or the trees old. Three years old is quite enough. The former conditions are a sure sign not only that the trees are all it is desired they should be, but are a guarantee that the roots are satisfactory as to character and quantity. Beware of old, large trees, seemingly good to look at, such as are often to be seen at auction sales, which may be offered cheap. They invariably prove disappointing as compared with younger trees.

Stocks.—The Apple is usually grafted on two stocks, that is to say, the Crab, commonly termed the free stock, and the Paradise, termed the dwarfing stock. Standards should be worked on the free stock, and bushes, espaliers and cordons, in the case of most varieties, on the dwarfing stock.

Planting.—As mentioned before, this can be successfully carried out any time between the first week in November and the last week in February, so that there is yet time left for those wishing to plant. If it is arable ground,

and it has been deeply broken up by the steam plough and cultivator, or by trenching, there will be nothing to do but to dig out the holes, say, 2 feet deep, breaking the bottom pan with the fork 1 foot deep, still leaving it at the bottom. Return the poorest of the soil to the bottom and reserve the best for the top strata of 1 foot; and, as mentioned before, if the soil is of a rather poor nature, add half a barrow-load of manure to the top soil of each tree, well mixing it with the soil. Fill the hole with soil to within 7 inches of the surface, treading it in fairly firmly, leaving the top of the soil in a concave form, something in the shape of a saucer, so that when the roots are laid down their tips will be in a more or less upright direction. Experience proves that the new roots inserted when this system of planting is adopted invariably show a tendency to rise upwards, which is what all good growers wish for, instead of striking down to the subsoil, as they are more likely to do if planted on the level or when the centre is higher than the sides. The hole being now ready to receive the trees, let each tree be taken in hand and its roots carefully examined. The larger roots should be shortened (if they have not already been done) to within 15 inches of the root-stem of the tree, and each of the smaller roots also shortened, the slant of the cut in all being on the top side of the roots, so that the young roots emitting from the cuts in due course will assume an upright direction instead of a downward one, which would be the case were the cut to be on the under side of the root. Cover the roots over carefully with soil after they have been laid on the surface in regular order, finally treading down the soil firmly and, in the case of standards, staking the trees and giving the surface of the soil over the roots of each tree a mulching of rich, rotten farmyard manure 3 inches deep.

Pruning the Young Trees.—Some growers favour the non-pruning of young Apple trees the first year. I will not enter into the merits or demerits of this practice, my notes having already, I am afraid, been unduly prolonged. But I must say that I prefer to prune the young trees as soon as planted. The trees at this stage will be furnished with from five to eight (more or less) leading young shoots of the previous year's growth. These are usually from 1 foot to 2 feet long. Each of these should be cut back by half its length, taking the precaution to cut to an outside bud. This cutting back will secure an even break of side shoots during the current summer down to the base of each shoot so cut back.

Protecting the Trees.—The simplest and, at the same time, most effective way of protecting standard trees against rabbits and sheep is by tying Thorn or Gorse faggots round the stems of the trees.

Selection of Varieties.—As regards the growth of the Apple for market, the grower will have to be content with a very limited number of varieties. Probably that grower who only grows one sort, and that Bramley's Seedling, will be the most successful in the end. Another aspect of the question in relation to varieties is as to whether it is better to plant largely of early, midseason or late sorts. It is a mistake to grow many, or, in fact, any midseason sorts. The market is then glutted and the prices rule low. It is better to grow early and later sorts only, and more of late than early sorts. OWEN THOMAS, V.M.H.

(To be continued.)

THE VALUE OF DWARFING STOCKS.

THE Apple grafted upon the Paradise and the Pear upon the Quince have now become general in the great majority of gardens. This is more particularly the case where much wall space available for fruit tree culture exists, or, on the other hand, in the open where bush and pyramid trained trees of moderate dimensions are alone permissible. That the use made of these stocks is of immense value cannot for a moment be doubted, as, apart from the precocity of cropping they engender, the very prospect of obtaining fruit in the course of a couple of seasons from the time of planting is an incentive of interest to many who could scarcely entertain the idea of waiting for a period varying from five to ten years before any substantial returns by way of produce could be expected from trees grafted upon the Crab and seedling Pear stock respectively. Passing in review over various plantations visited, it becomes at once apparent that, in very many instances, the great difference existing between the root system of the two stocks is not so fully recognised as it might be, to the advantage of the trees in the matter of growth and their continued fruitfulness and longevity. To be brief, it may be stated that the Crab or wild Apple is very free-rooting, sending out numerous strong feeders, which in strong soil ramify in all directions, causing a corresponding vigorous top growth, much of which has to be removed as useless shoots at the pruning season, and until this excess of vigour is checked, either naturally or by judicious root-pruning, well-ripened and productive fruit-buds will be but sparingly produced. Dwarfing stocks, on the other hand, have but few, if any, strong roots, and such seldom wander far from the base of the tree; hence the soil in the course of a very few years is completely occupied with masses of fibrous roots in every way satisfactory from the cultivator's point of view. To maintain this very pleasing state of matters for a number of years, a course of manurial stimulants must be applied yearly, preferably at intervals during the season of growth, when the crop borne and the appearance of the foliage convey to the observant attendant a fairly correct idea of what is wanted, whether this be a copious supply of clear water only, or other in which a quantity of some approved fertiliser has been dissolved.

The rainfall of the past ten weeks has been exceptionally heavy, and to this heavy snowfalls have been added, which, drifting deeply against walls and slowly dissolving there, have thoroughly permeated the whole bulk of soil with moisture, so that now the roots are in the best possible condition to receive and assimilate, with returning warmth and vitality, any nutritive dressings by way of soil or manures that are most readily obtainable. As already stated, dwarfing stocks are very fibrous-rooted, and as such do not penetrate deeply; hence the surface soil cannot be much disturbed without doing damage. When the weather is settled and the soil easily worked, the surface may be lightly pointed over with a fork a few inches in depth or until roots in quantity are disclosed. Carefully remove the soil thus disturbed, and replace it with the best turfy loam available. This is best for use after having been cut and stacked for a few months to kill the strong roots of grasses it contained, also to render its manipulation by way of pulverisation more easily accomplished. If thought necessary, lime rubbish, burnt ash, or manures, such as bone-meal or superphosphate of

lime, may be incorporated with it; but if of good quality and fibrous, these are not generally necessary. Spread the compost evenly over the whole surface as far as, or slightly beyond, the radius to which the roots extend, and make it firm by treading or other means. Trees that have been frequently treated in this way produce such masses of surface roots that the reduction of inert soil cannot successfully be carried out; furthermore, an undue height or mound about their bases renders further additions of new soil undesirable. In such cases some approved form of easily-applied manure, such as bone-meal or basic slag and kainit in equal parts, applied at the rate of from 2oz. to 4oz. per square yard and slightly pointed in, will form a good substitute. Either, however, should be applied at once for the trees to reap full benefit therefrom during the current year. Failing any of the courses named, there still remains a very potent source for good in the drainings from cattle-sheds, where such are collected into tanks, or at present, and while the wet weather lasts, the liquid exudations from manure-heaps can often be collected and, after dilution, if very strong, be given to any trees that are considered most in need of assistance to restore their wanton health and vitality.

JAMES DAY.

Galloway House, Wigtonshire.

NURSERY NOTES.

THE FASCINATION OF TESTING SEEDS.

THE average reader may reasonably be pardoned for displaying ignorance when the testing of vegetable and flower seeds is spoken of or written about, because hitherto but little relating to this important and fascinating phase of seed-growing has been revealed. We use the word "important" advisedly; the testing of seeds is very important indeed to those whose business it is to sell the seeds, and also to those who have to grow crops from the seeds that are supplied.

Naturally, those who do not understand the process will ask: Why and how are the seeds tested? Seeds of both vegetables and flowers are tested to prove their germinating or growing power, so that the seedsman may know that if failures do occur, it is not the fault of the seeds, but is due to something wrong in the treatment they receive, or to other extraneous conditions over which he has no control.

The way in which seeds are tested was amply demonstrated to us recently at the noble buildings of the old and well-known firm of Messrs. James Carter and Co. at Raynes Park, near Wimbledon, buildings that must be familiar to every traveller on the L.S.W.R. main line. During the past year, with the thoroughness characteristic of the firm, Messrs. Carter have added to these buildings, which were opened last year to supersede their old premises at High Holborn, extensive seed-testing laboratories, fully equipped with the latest testing appliances, so that they now have every facility for ascertaining the germinating power of all the seeds supplied by them to their customers.

Briefly, the method adopted is as follows: When a consignment of Peas or other seeds comes into the warehouses, it is, first of all, thoroughly cleansed by means of patent, electric-driven machines; then large seeds, such as Peas and Beans, are hand-picked, so that discoloured or

damaged seeds which the machines may have missed are eliminated. After going through these preliminary processes, the seeds are ready for testing. A sample is taken from the bulk, twenty-five, fifty, or one hundred, according to the size of the seeds, carefully counted and any impurities noted. These counted seeds are then placed on prepared squares of thick, moist felt, or circular discs of moist paper, the former for Peas and Beans and the latter for smaller seeds, and stood in the frames or glass cases, which are maintained at a suitable temperature to induce germination. After a given time, and when the seeds ought, if they are up to the high criterion set by the firm, to have germinated, each set is carefully recounted and the percentage germinated carefully noted. As all records are carefully kept in ledgers, the germinating or growing power of all seeds supplied by the firm is known; and, needless to say, should any fail to pass the tests, they are not sold, but destroyed. In many instances, notably in Beet-roots, this test of germinating power is also a test of trueness of stock, the seedlings showing, to the experts employed in the work, characteristics that enable them to tell whether rogues are present or not. The testing of trueness of stock, however, must, to a very large extent, be done under more natural conditions, and this is where the extensive trial-grounds that surround the buildings at Raynes Park are so valuable. Travellers on the railway referred to cannot have failed to notice the numerous labels that are dotted about, each representing a stock of some vegetable or flower such as Messrs. Carter supply to their customers. Thus we see how important the testing of seeds is to both vendor and customer—an operation that costs the first-named a very considerable sum, but one which gives satisfaction to both.

In addition to these new seed-testing laboratories, Messrs. Carter and Co. have had a large kitchen and dining-rooms built for the use of the staff, believing that contented and happy work-people study the interests of the firm and the firm's customers. Last year we referred to the main building, which had then recently been opened, and on the occasion of our recent visit we were pleased to note the clean and business-like aspect that characterised the whole place.

THE EDITOR'S TABLE.

Greenhouse Flowers from Berkhamsted.—

Mr. A. G. Gentle, gardener to Mrs. Denison, Little Gaddesden, Berkhamsted, Herts, sends a most charming collection of greenhouse flowers, all of which show signs of excellent cultivation. Mr. Gentle writes: "I am sending a few flower-sprays for your table of the following kinds. *Acacia cultriformis* is, in my opinion, the premier of Acacias, with its drooping habit and yellow blossoms, which just now are quite cheerful. The specimen here is about twenty-four feet by fourteen feet, and is trained on the roof of the conservatory. *Primula malacoides* is just now in full beauty. I have two dozen plants in 4½-inch pots, and there are an average of thirty spikes out on a plant. Some of the spikes have five whorls; there are two shades of colour, as you will see. *P. rosea* is much stronger in growth and flower. *Grevillea Pressii* and *Phyllica ericoides* have been in flower since Christmas. The *Rondeletia*, a nice orange red flower, is from the stove-house. *Hardenbergia macrophylla*, with its small mauve flowers, has been out three weeks, and looks like continuing for another three weeks."

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Our Spring Number.—Our next issue, dated March 2, will be a specially-enlarged spring number, and will contain many articles of more than usual interest. These have been written by the best living authorities on gardening, both professional and amateur, and will, we feel sure, prove both interesting and useful to our readers. The illustrations, too, will be a special feature, and a coloured plate of new *Gaillardias* will be included. As we anticipate a large demand for this issue, we advise those readers who require extra copies to order them in advance. The price will, as usual, be one penny.

Green-leaved Aucubas.—These are undoubtedly among the best evergreen shrubs we possess, while for town planting they are unequalled. Why the spotted-leaved forms have been so extensively planted in preference to those with rich deep green leaves it is difficult to understand. One is as readily propagated as the other, and they are equally free in growth. *Aucuba* bushes are freely used in unfavourable positions in most gardens. The effect, however, with the spotted-leaved kinds is not so pleasing as it would be if the leaves were a bright rich green.

The Sea Buckthorn.—In making a selection of hardy trees and shrubs with ornamental fruits, special attention should be given to those on which the fruits remain in good condition for a lengthy period. The Sea Buckthorn (*Hippophaë rhamnoides*) is still (February 15) bright with the orange yellow fruits. With the requisite training in a young state, the Sea Buckthorn will develop into a small, shapely tree. For effect it is, perhaps, best seen in bush form, 6 feet to 8 feet in height, in large groups by the water-side. It must be borne in mind when planting that there are male and female forms. Three male plants will be ample in a group of eighteen or twenty bushes.

Asparagus sarmentosus.—When well fruited, this South African *Asparagus* affords a very showy plant for a warm greenhouse, in which structure it may be used as a pillar plant or for a hanging basket. Even when not in fruit, its long, plumose branches are very effective, but when large numbers of bright red berries are seen among the leaves, the result is much finer. Some people fail to obtain a good crop of fruit, and it is possible that this is due to keeping the plants in an overmoist atmosphere and subjecting them to too much shade. A well-fruited example was noted recently growing against a pillar of a fairly dry, light house in a position where it was fully exposed to sun for the greater part of the day. Planted out in loamy soil it had made good growth, and the berries appeared in profusion. When exposed to full sun, it sometimes happens that the colour of the

leaves is paler than is the case when the plants are grown in a moist and shaded structure, and this may account to some extent for the apparent preference for the latter method of culture.

Sudden Falling of Elm Branches.—The theory respecting the sudden falling of large Elm branches without any apparent cause on a calm day is that it is caused by a sudden flow of sap into the branches. Sudden changes in the weather and temperature will cause the sap to run up, as, for instance, heavy rain following a hot day in autumn, or rain after a long spell of drought.

Testing Carnation Cuttings.—An interesting article published as far back as 1900 describes how diseased cuttings of Carnations are distinguished at Cannes. A piece of board or tin pierced with holes is placed over a vessel of water and the cuttings are inserted in the holes, so that their cut ends dip slightly into the water. After twenty-four hours the mycelia of the infected cuttings made its appearance at the cut ends as white floccose wefts.

Victoria Medal of Honour.—At the recent annual meeting of the Royal Horticultural Society it was announced by the president, Sir Trevor Lawrence, Bart., K.C.V.O., that Lieutenant-Colonel D. Prain, C.M.G., F.R.S., Director of the Royal Botanic Gardens, Kew, and Mr. E. H. Wilson, the assiduous plant-collector of China fame, were the recipients of the Victoria Medal of Honour in the places of the late Sir Joseph D. Hooker, O.M., F.R.S., &c., and of the late Mr. James Douglas. We feel that this honour could not have been more worthily bestowed. Sixty-three medals (one for each year of Her Majesty Queen Victoria's reign) are awarded by the Council of the Royal Horticultural Society to distinguished members in the world of horticulture.

Androsaces on Low Walls.—An admirable example of the manner in which some plants not often considered easy to cultivate can accommodate themselves to certain circumstances is shown by the fact that several *Androsaces* will grow admirably on the flat top of a low wall with a minimum of soil, 2 inches or 3 inches being sufficient. In the attractive garden of Mr. John Platt, Hyning, near Carnforth, this may be seen, as on the top of a low wall 4 feet or 5 feet high such *Androsaces* as *A. sarmentosa*, *A. lanuginosa*, *A. Chumbyi* and *A. arachnoidea* are all thriving, and last year bloomed in a satisfactory way. A few stones laid about them will ward off any excessive drought which might affect these plants in such a position. Rarely, indeed, does one see healthier plants than those at Hyning, where Mr. W. G. Watson, Mr. Platt's gardener, takes much care of the good collection of alpine.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hardy Cyclamen.—These lovely little flowers have only one defect—they are too small. Hybridisation with the larger-flowered *Cyclamen persicum* seems quite possible for those who have the skill and the appliances. As the advertisements say, "Now is the time," for both the indoor and the outdoor varieties are in bloom.—R. [Mr. F. Herbert Chapman, who raised *Freesia Chapmanii*, has been working on the lines suggested by our correspondent for some time.—ED.]

Polygala oppositifolia.—I came across a nice plant of this the other day, and it seems to deserve a note for the sake of those who wish to grow a flower which is not too often seen, and who have a cool house in which it will flower during the winter months. Its terminal racemes of purple flowers look extremely well on a good-sized plant, where the naturally arching stems are allowed to develop to their length of 3 feet or 4 feet. The grower with whom I saw it prunes it rather hard back after the flowering-time and encourages it to break from the base by liberal treatment, repotting it when it begins to break.—A. M. D.

Different Tastes Among Flower-Lovers.—A few weeks back, in an article upon single *Chrysanthemums*, if I remember aright, a correspondent made the remark that it was an extremely good thing there were so many different tastes among flower-lovers. This seems strikingly illustrated in your issue of February 10, where, in an article on Sweet Peas, a correspondent states that "the grandiflora or plain-hooded type is doomed . . . but for beauty and grace the waved varieties are unbeatable," while another, a little further down the same page, bewails "the deplorable destruction of that once-beloved blossom, now, alas! long robbed of its true form and fragrance," and says that he and others "have privately lamented the loss of the Sweet Pea as we knew and loved it some thirty years ago, and heartily despise that deformed and too often scentless flower that now bears its name."—A. LAWRENCE.

An Error in Sowing Small Seeds.—Your correspondent A. Allardice does well to draw attention to this matter on page 66 of the issue for February 10, as at the present time many inexperienced cultivators may learn a few valuable hints from the notes on the subject. Your correspondent does not mention whether he waters the soil in the pots prior to sowing the seeds. I gather he does not water it. I am in favour of using the compost in a nice workable condition, and, having filled the pot, pan or box to a certain point from the rim, making the surface even, and then watering carefully through a fine-rosed watering-can. Having done this, the soil is left to drain for two or three hours; then the seeds are duly sown on the surface and covered lightly with fine dry soil, no watering being done on the surface afterwards, and the soil never cracks nor becomes hard. In many instances the soil remains sufficiently moist to ensure the germination of seeds; if not, the pans or pots are immersed. In the case of very fine seeds, such as tuberous *Begonias* and *Gloxinias*, a light sprinkling of silver sand is put on the surface of the watered soil and the seeds very gently pressed into it, no covering soil being put on.—B.

The Madeira Orchis.—The Madeira Orchis (*O. foliosa*) is a plant which never becomes cheap, although it has been a long time in cultivation, and in some gardens increases fairly well, though not rapidly. The demand is apparently the main cause of its high price, but it is certainly a flower worth paying something more than the ordinary cost of hardy plants to secure. Half-a-crown or 3s. 6d. is about the usual charge for this handsome plant, and those who establish it do not, in the long run, rue their investment. In good, moist soil it forms nice plants with large, broad leaves. The flower-spikes are from a foot to two feet high, and bear a number of rich purple-red flowers in summer. It is a plant which looks very handsome when it is established. A soil of peat and loam with some sand suits it well, and it should never suffer from want of moisture at the roots. It is usually cultivated in sun, but I know many good plants in a partially-shaded position.—S. A.

Gypsophila paniculata.—The *Gypsophilas* are a small family, of light and graceful habit, which will thrive in the ordinary border and produce their fairy-like spikes from June to September. *G. elegans alba* is usually in great demand for decorative purposes, especially among the Sweet Peas, while the variety *rosea* and the dwarf rose pink *muralis* are also favourites with many. It is, however, to the one named at the top of this note that I would particularly call attention. This is a hardy perennial, and no collection of herbaceous subjects can afford to be without this useful plant. It presents a gauze-like appearance, growing about two feet high, and generally bears a mass of small white flowers, which may be cut in sprays according to the size required. With many people flowers are rather scarce during the winter months, and to these I would suggest that they cut off a quantity of sprays of *G. paniculata* when the flowers are fully expanded and arrange them in vases, where the sprays will gradually dry and remain in beautiful condition for several months; in fact, at the time of writing (February 3) I have a very pretty vase of them on the table.—S.

Primula malacoides.—This *Primula*, with its lovely pale mauve flowers, borne tier upon tier, is a welcome addition to the winter-flowering plants for the greenhouse and conservatory. The stems, stiff and erect, need no support, and when the side shoots, which are produced in profusion, are in bloom the plant is quite beautiful. Grouped with *Primula stellata* the effect is very fine indeed. It is also very useful for cutting, and the lightness of its long spikes renders it ideal for table decoration. Seeds should be sown in pans in or near the first week in August, and be germinated in gentle heat. When the seedlings are large enough to handle, they should be potted singly into 3-inch pots, the compost to be two parts good loam, one part leaf-mould, and one part equally of coarse sand and road grit. Placed in a cold frame the young plants grow rapidly, and in a few weeks should be ready for the final shift into 4½-inch or 6-inch pots. Several plants arranged in deep, round pans provide a very pleasing show. The compost used now should have, in addition to the ingredients above mentioned, a little well-decayed cow-manure and a sprinkling of bone-meal and soot. Stand the plants on a shelf in the cool greenhouse, with free ventilation without draughts. Water must be applied sparingly, just enough being given to prevent the plants flagging. In December the flower-spikes appear, and during the succeeding two months the plants will furnish a

splendid show of flowers.—A. BROTHERSTON, Henley-on-Thames.

Salvia Pittieri.—I see in the February 17 issue, page 78, a letter on *Salvia Pittieri*. Last year I had sent me from the United States a packet of seed labelled "Scarlet Salvia," which, I think, must have been *Salvia Pittieri*, as it grew exactly as described by Miss Randolph, with the difference that most of my plants were 4 feet high. I planted them in a double row, with an edging of *Violas* in two shades of blue, and the effect throughout the autumn was excellent.—C. L. C.

The Poison Ivy.—I have been much interested in reading the letters of your correspondents (page 79, February 17) about their experiences with Poison Ivy. This Ivy grows in the woods of my old home in the United States. Every new arrival on the estate used to be warned to leave it alone, and I only remember one case of poisoning from it, when the wife of our overseer was badly attacked after Blackberrying. She was very ill for weeks, her whole body being swollen and black. Her case caused much anxiety, and I think I am right in saying that her life was in danger at one time. Sugar of lead, I think, was the remedy. It does not poison everyone, but I cannot tell you why. Personally, I used to be able to handle it, and we children used to go among it freely without harm, as did everyone else on the place.—C. L. Cox.

Adonis amurensis.—This did not show its flower-buds with me this year until about February 12. It is not, however, in a position where it receives much of the scant sunshine of the season, as it is under the branches of a yellow-barked Dogwood, and is partially shaded by some other shrubs. This plant has been here for several years, and is doing well in a position which, though partially shaded, is of a dryish nature. I attribute a good deal of the disappointment experienced with this *Adonis* to the destruction of young plants by slugs, which, it is notorious, have a penchant for plants which have newly come to a garden, and also to the fact that plants seem a little difficult to pull through the second winter after being planted in the garden. I think the plants we sometimes receive are a little too old for safe transplanting, and that they frequently have sufficient strength in the roots to enable them to flower the first year, but that after that they frequently die.—T. F. B.

A Beautiful Italian Crocus.—The several forms of the lovely *Crocus Imperati* are now in bloom. The exterior of the outer segments is buff, either self-coloured or nearly so, or feathered and lined with deep purple. In an unopened condition the flowers are extremely pretty, but it is when they open out, as they do with but little sun, that the full beauty of the flower is perceived. The purple of the segments is accentuated by the orange anthers and stigmata and the yellow filaments, and a clump in bloom is a sight to be long remembered. It is also a cheap species to buy, so that it may be planted in considerable quantity. There is a white variety named *albidus*, but this is usually found to be less enduring than the other; and one with rosy-coloured segments, which seems unobtainable, is named *Reidii*. Of the ordinarily coloured *Crocus Imperati* there are sometimes offered under the name of *C. I. longiflorus* some handsome, large-flowered varieties, but these differ little in other respects, save that they are larger than usual.—S. ARNOTT.

Improving Gravel Paths.—Undoubtedly gravel paths must be attended to during the winter months if they are to remain in good condition throughout the summer. The practice of your correspondent "C. T.," as advised on page 67, February 10, is sound; many paths only need such attention in order to keep them not only neat in appearance, but in really good condition. One of the biggest mistakes made, I find, is to leave the surface covered with too fine gravel immediately under the trees or their outspreading branches. In summer-time we often experience heavy rainfalls, and then the fine gravel is washed away. Some coarser gravel ought to be well rolled into the surface under trees.—SHAMROCK.

Planting Apple Trees.—I am indebted to "Apple Tree Grower" for his criticism of my note on the above (page 54, February 3). I always advise growers of fruit trees to obtain their trees from a reliable source. Firms of repute, having a thorough knowledge of the requirements of each individual variety, can always supply trees "worked" on suitable stocks for various soils, deep or shallow. When dealing with light, shallow soils, I would trench these as deep as possible, and plant trees on the Paradise stock rather deeper than they had been growing in the nursery. If trenching was impossible, then the method of preparing stations as described in my previous note would be adopted. This method would also be followed with bush, cordon or other trees planted in restricted areas; for it is necessary for the beginner to remember that the stock has great influence on the spread of the branches. One is seldom fortunate enough to find the ideal soil for Apples; but supposing such to be the case and the site was also favourable, I would trench this as deeply as possible and plant trees both on Crab and Paradise stocks to just the mark that they had been growing previously. It is almost impossible to plant trees on the Crab stock as shallow as can be done with the Paradise.—COLIN RUSE, *Lambay Island, Rush, County Dublin.*

Sparmannia africana.—Your correspondent "P." (page 42, Jan. 27), when writing of this old and useful plant, omitted to mention one very interesting feature, viz., the sensitiveness of the stamens. When lightly touched with anything, they will be seen to spread themselves outwards, and will occupy about double the space they did before. Other sensitive organs which are deeply interesting are the stamens of *Berberis* and the stigma of *Mimulus*. The stamens of *Berberis* when touched close up around the pistil. The stigma of *Mimulus* is two-cleft, and resembles a mouth with upper and lower lips. These lips, in a young flower, are reflexed, and, consequently, separated from each other. Touch them, and they immediately close up together. I would feel obliged if you or any readers of *THE GARDEN* would kindly give me the names of other plants having sensitive organs that respond to the touch. *Mimosa pudica*, *Dionæa muscipula* and *Drosera* I am acquainted with. There are many plants whose leaves and flowers are affected by light and heat, but I do not ask for these.—T. S., *Westbury-on-Trym*. [The stamens of *Kalmia latifolia* respond as readily to the touch as do those of *Berberis*, and the anthers of *Schizanthus* are sensitive, likewise those of the Artillery Plant (*Pilea microphylla*). *Torenia Fournieri* has a sensitive stigma similar to that of the *Mimulus*. A number of Orchids exhibit a most remarkable response to the touch, as in the case of *Pterostylis* and *Masdevallia muscosa*, while the manner in which the pollen masses of

Catasetum are ejected is a matter of great curiosity.—ED.]

Cypripedium insigne Well Grown.—As an old subscriber to your paper, I am always pleased and interested in the illustrations of specimen plants, and as I have been fortunate this year in having two very fine plants of *Cypripedium insigne*, I had them photographed side by side, and enclose copies which may be of interest to you. There are twenty blooms on one and twenty-one on the other, and the pans are 18 inches across. I think you will agree that the plants are very healthy specimens, and if you consider them worthy of an illustration and the photograph is good enough for reproduction I should be very pleased.—C. H. CHURCHILL, *Claremont, Crescent Road, Enfield.*

Primula Rusbyii.—I observe in the "Year Book" of the National Hardy Plant Society a note on this *Primula* in the course of an article on "Some of the Rarer Primulas," by Mr. John Macwatt, Duns. The writer of the article states: "P. Rusbyii.—A Rocky Mountain species: has proved in my experience one of the most intractable plants I have come across. I have grown it for several years, and have never succeeded in



THE LADY'S SLIPPER ORCHID, *CYPRIPEDIUM INSIGNE*, GROWN BY A READER.

flowering it." This note induces one to ask the experience of others with this *Primula*. Not many professionals even will be able to say, "I have grown it for several years," seeing that it is not only troublesome to flower, but also to grow. I think even Mr. Reginald Farrer will be ready to acknowledge this, as I see that his reference to it in "My Rock Garden" is confined to the following: "Now sliding briefly over P. Rusbyii, a queer, deciduous Mexican with dark brownish-purple flowers, we come to the glory of the bog-Primulas." The latter is, of course, P. rosea. I managed to pull P. Rusbyii through two or three seasons by planting it on a terraced rockery, facing south-east, in loam, peat and sand, with some stones sunk about its roots and gravel on the surface. It had frequent supplies of water in spring and summer, but it did not flower, and was eventually lost.—S. ARNOTT.

FORTHCOMING EVENTS.

February 28.—Royal Botanic Society's Meeting.
March 2.—Société Française d'Horticulture de Londres Meeting.

THE ROSE GARDEN.

THE ART OF PRUNING ROSES.

THE correct and judicious pruning of Roses is one of the main points in their culture. However well we may have cultivated them, irreparable harm is too frequently done by a wrong use of the knife. With the vast difference in habit and characteristics they now possess it is quite impossible to give any hard-and-fast rules.

What is most astonishing is to find so many of our most showy decorative Roses still ruined by such reckless pruning as cutting off their strongest growths, generally because these had failed to bloom the same season as they were formed. It is difficult to persuade the unobservant grower that, as a general rule, the weak and puny growers should be cut back hard, and the extra vigorous varieties barely touched with the knife; but that is one of the most useful general rules I can give.

The fact is, these strong growers are carrying embryo flowers in almost every well-matured eye throughout their length; and bearing that fact

in mind, one can readily perceive the folly of removing it at such a stage of its existence. The really proper time for cutting into this class of Rose is during late summer, after the flowers have been realised, as they seldom do much upon the same rod later. This summer pruning takes away what will be of little future service, and at the same time encourages the crop of younger rods that will be so valuable the following season, by giving a larger amount of sap, and also more air and light in which to develop.

For example, to cut away the long rods and trails of such Roses as the Crimson and Blush Ramblers, the wichuraianas that partake of the well-known Dorothy Perkins type, also the strong trailing growths of the Ayrshires, is removing the most valuable part of their wood, and entirely losing the glorious effects these Roses give when their long growths are retained and those that had flowered removed. There is generally a good bit of thinning that can be done, especially the avoidance of crowded centres and indifferently-ripened wood.

The beautiful cascades of flower found upon Dorothy Perkins are not obtained if we do not

leave long, well-ripened growths of the previous year. And this applies to most of our strongest growers. Much more thinning out entirely would be advantageous. Instead of shortening these more than is needed to get rid of frost-bitten points, lessen their number outright rather than be overcrowded, always leaving the ripest rods in preference to longer ones that are not so well matured.

Coming to what I may perhaps be allowed to call normal growers, among the Hybrid Perpetuals, Teas and Hybrid Teas, a fairly safe rule can be laid down. The centres should be completely thinned out and any badly-placed shoot also removed. The rest need to be cut back about two-thirds of their length, but always to an eye facing outwards. Cut close to the basal eye, not leave some inches above this, which would only decay and frequently carry this decay much further down the shoot, simply because there had been no living cut to callus over in a clean and healthy

Folkestone, Papa Gontier, Marquis of Salisbury, Anna Olivier, Lady Roberts, Enchantress, General Schablikine, Maman Cochet, Mme. Falcot and Safrano, with those two charming decorative Roses Souvenir de Catherine Guillot and Souvenir de M. W. Robinson. A. P.

TREES AND SHRUBS.

GARDEN LILACS AND THEIR CULTIVATION.

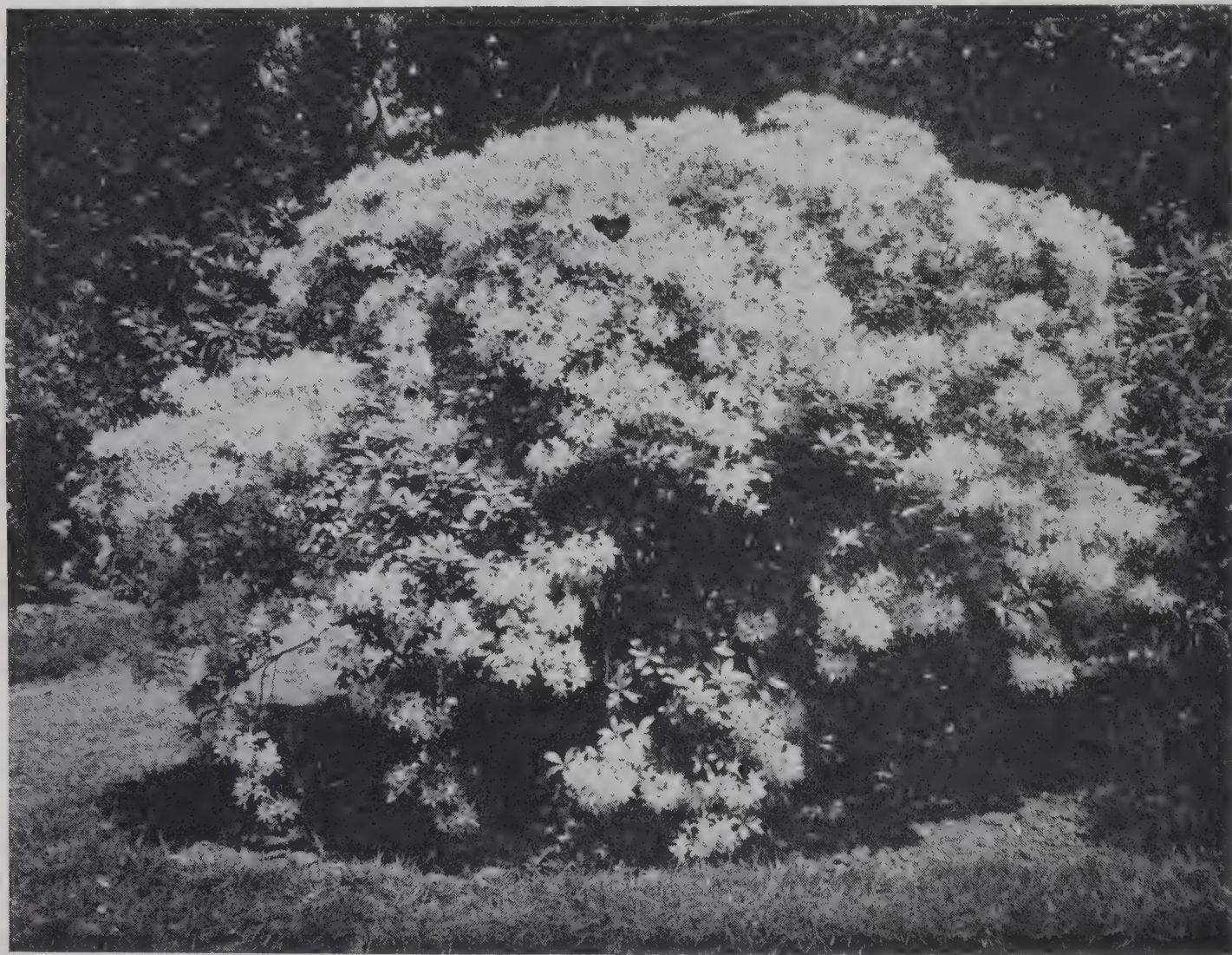
FEW kinds of shrubs are more popular than the various kinds of Lilacs, for the flowers are at the same time delicately coloured, showy and deliciously fragrant. Added to this, they are within the reach of everyone who has a garden, for they are inexpensive, require no elaborate culture and, although partial to good

down suckers, which, even if frequently removed, tend to weaken the plant, while if neglected for a year or two they may easily ruin the variety.

The Best Soil and Manure.—When planted in good loamy soil, Lilacs keep vigorous for many years without feeding; but where the ground is inclined to be poor, it is a good plan to provide a surface-dressing of well-decayed farmyard manure each year. When the branches appear to be weakening, fresh vigour may be infused into the bushes by giving the plants a few applications of cow-manure-water during the period of growth. Premature weakening of Lilac bushes is sometimes brought about by allowing a lot of suckers to appear about the bases and centres of the plants. As a rule, little good can result from allowing such shoots to remain, even if the plants appear to be fairly vigorous; therefore it is a good plan to go over them annually and prune away any useless wood. The reduction of the

branches often results in more flowers and larger trusses, on account of the strength which has hitherto been spent on the production of useless wood going to build up the principal branches.

Lilacs for Forcing.—In addition to the value the various Lilacs possess for garden decoration, they are of great importance for forcing, and large quantities of Lilac blossom finds its way into our principal flower markets between Christmas and Easter. To provide this blossom special methods of culture are adopted for the plants. Owing to the expense attached to early forcing, it is necessary to ensure that the maximum number of flower-heads shall be obtained from the minimum amount of wood; therefore every branch a forcing plant carries ought to be a flowering branch. To obtain this result the appearance of the plant is sacrificed, and it may be seen as a gaunt, leggy specimen with a few leading shoots only. These shoots are, however, very strong, and they are furnished with vigorous flower-buds. This character is reached after two or three seasons' disbudding and pruning, for those few shoots only are allowed to grow, all other shoots being rubbed off while quite soft. Needless to say, no suckers are left to develop. Good, well-manured ground is necessary for the cultivation of these plants, and they are



ONE OF THE SWAMP HONEYSUCKLES (AZALEAS). (See page 93.)

manner. This is of greater importance than is generally recognised. Should a few extra-sized Roses only be wanted, thin the shoots harder and prune the remainder closer still.

The charming Dwarf Polyanthas need very little more than thinning in the centre, and the remainder cut back halfway. I have seen this section cut off with hedge shears until they looked like trimmed-up Box; but they are well worth a little more care than that.

I can only give a few general notes, because of lack of space, but I would like to finish with a short list of varieties that I have found do much better when the growths are simply tipped rather than pruned. These are Mme. Gabriel Luizet, Paul Neyron, Gloire de Margottin, Camoens, Bardou Job, Mme. Pernet-Ducher, Grüss an Teplitz, Viscountess

loamy soil, give satisfactory results in almost any kind of garden ground.

The garden Lilacs owe their origin to two species, those with large inflorescences and flowers and strong, upright branches being most closely related to *Syringa vulgaris* (the common Lilac), and those with smaller inflorescences and flowers and less vigorous branches bearing a closer resemblance to the Persian Lilac (*S. persica*).

Propagation.—The varieties may be increased in several ways. When on their own roots, suckers may be detached from the parent stock and grown as separate plants, cuttings can be rooted, branches layered, or they may be grafted upon stocks of the common Lilac. The latter method of increase is not to be recommended when other ways suggest themselves, for it is difficult to keep

improved by an occasional application of liquid manure during the growing season. During August each plant is chopped round with a spade to assist in ripening the branches, the root-pruning thus practised effectually checking any chance of late growth. Plants which have flowered are cut hard back and given two or three years' cultivation before they are again forced. Another method has been adopted of obtaining small plants for forcing in 6-inch or 7-inch pots. To do this the plants are dwarfed by grafting or budding them upon stocks of Oval-leaved Privet. Grown in this way they are short-lived, and rarely do duty for more than one or two seasons.

Syringa persica is a comparatively dwarf-growing Lilac, for plants 5 feet high are less common than those a couple of feet lower. Shapely bushes

are, however, formed, which provide innumerable flowering branches. The elegant panicles of lilac flowers are borne from both terminal and axillary buds with great freedom. It is one of the most fragrant of all Lilacs. A variety called *alba* bears white flowers, and *laciniata* has divided leaves.

S. vulgaris (the common Lilac) is well known to everybody by its large, upright heads of lilac flowers. By hybridising and selection a large number of varieties have been raised, which show a remarkable range of variation in colour and size of inflorescence. The trusses of some kinds are 9 inches long, and the colours range from white to red and from lilac to purple.

Many double-flowered forms also exist; generally, the single-flowered kinds are more beautiful. That is, however, a matter for the taste of the planter to decide. The fragrance of some of the varieties is less delicious than that of the type, but there is little to complain of in the majority of them.

Good Single Varieties.—*Alba*, *alba grandiflora*, *Frau Bertha Damman*, *Marie Legraye* and *Mlle. Fernande Viger*, white; *Charles X.*, *Géant des Batailles*, *Philemon* and *Souvenir de Louis Spath*, red; *Duc de Orleans*, *Dr. Lindley*, *Mathieu de Dombasle*, *Delphine*, *Ville de Troyes* and *Aline Marqueris*, various shades of lilac.

Double Varieties.—*Marie Lemoine* and *Mme. Abel Chatenay*, white; *Alphonse Lavallée*, *Charles Joly*, *Dr. Masters*, *Monument Carnot*, *Leon Simon*, *Mme. Jules Finger*, *rubella plena* and *Michael Buchner*, various shades of lilac. Some of the less fragrant are *Duc de Orleans*, *Ville de Troyes* and *Delphine*.

S. chinensis (the Rouen Lilac) is a hybrid between *S. vulgaris* and *S. persica*. Growing 15 feet or more in height, it possesses much of the grace of *S. persica* and is quite as floriferous. It is in every way worthy of inclusion among the best flowering shrubs.

HARDY AZALEAS.

THE value of the hardy Azalea in our gardens can scarcely be over-estimated. Three important points in good garden plants are possessed in no uncertain degree by the hardy Azaleas, namely, freedom of flowering, good habit, and an infinite variety of colours, to which, in most instances, must be added fragrance. There are a considerable number of species, but only some six or seven have been used to any extent in the development of the hardy garden Azaleas. These are *A. mollis* and *A. sinensis*, from China and Japan; the Caucasian species, *A. flava* (*pontica*); and the North American species, *A. calendulacea*, *A. nudiflora*, *A. occidentalis* and the Swamp Honeysuckle, *A. viscosum*. The name of Ghent Azalea has been given to a large section of these hybrids, presumably because some of the first varieties

were raised at Ghent. The name is somewhat misapplied, however, for our British raisers can justly claim a considerable amount of the credit for the present-day race of garden Azaleas. Many beautiful varieties have been raised in the Knap Hill Nurseries, near Woking, and more recently the same nurseries have given us a late-flowering race, the result of crossing *A. mollis* and *A. occidentalis*.

For delicate colours and varied tints it is doubtful if the hardy Azaleas have any equal; certainly they are unsurpassed by any other hardy shrub. Varied shades of white, cream, yellow, orange, pink, rose, red, scarlet and crimson are all

of seedlings is an interesting though somewhat lengthy procedure. Flowering plants can be purchased at a comparatively cheap rate, so that except as a hobby it is often preferable to buy plants.

A list of named varieties is unnecessary here; they may be easily found in a nurseryman's catalogue. In making a selection too many of the *mollis* section should not be planted, for though very rich in colour, the flowers possess little or no fragrance and, flowering towards the end of April and in early May, are soon spoilt by a late spring frost. The name Azalea has been dropped by botanists in favour of *Rhododendron*; but for garden purposes the popular name of Azalea is preferable and more descriptive of the plants concerned. A. O.

GREENHOUSE.

THE BLUE AMARYLLIS. (HIPPEASTRUM PROCERUM.)

OF the numerous species and hybrid *Hippeastrums* in cultivation, there are few more beautiful when in flower than *H.*

procerum. It is, however, quite distinct from any other species, the most remarkable character being the large, long-necked bulb, which often measures 4 feet in length. In this respect it might easily be taken for a *Crinum*. A plant of this *Hippeastrum* is now flowering in the Mexican House at Kew; therefore visitors to the Gardens, especially lovers of these plants, should not fail to pay a visit to this house during the next few days. The plant is one of a dozen imported from Brazil last autumn. Of these, three very fine bulbs were planted in an open, loamy compost on the rockery at the south end of the house. The bulb of the plant illustrated is about 4 feet in length; from the centre rises an umbel consisting of five flowers of a delightful pale purple colour. Individually the flowers are from 6 inches to 7 inches long, by 5 inches in diameter across the tips of the segments. The leaves are sickle-shaped, from 2 feet to 3 feet long, and 2 inches broad, and these alone provide a most attractive feature of the plant. It is one of the most interesting of greenhouse bulbous

plants at this season, and has already attracted the attention of many visitors to the gardens.

H. procerum was introduced from South Brazil in 1863, and was first flowered in this country by Dr. Rayner of Uxbridge in 1870. On account of its shyness in blooming, it is not surprising that it is so little known. Other names by which the plant is known are *Amaryllis procera* and *A. Rayneri*. It is also commonly known as the blue Amaryllis, the name having been derived from the unusual colour of the flowers. W. T.



THE BLUE AMARYLLIS (HIPPEASTRUM PROCERUM), NOW IN FLOWER
IN THE MEXICAN HOUSE, KEW. (MUCH REDUCED.)

represented. The flowering season extends from the end of April to July.

Azaleas may be planted in various parts of the garden proper, pleasure grounds and open woodland. Should the natural soil contain any appreciable quantity of lime, beds of peat, sandy loam and leaf-mould must be prepared for them. They may be readily propagated from cuttings of half-ripe growths inserted in pots of sandy peat during July and August. A larger percentage of successes in rooting usually results when the propagating-frame contains a little bottom-heat. The raising

THE CAPE PRIMROSE AND ITS CULTIVATION.

DURING recent years a very great improvement has been effected in the *Streptocarpus*, or what is commonly called the Cape Primrose, and I venture to predict a much greater future for these intermediate or greenhouse flowering plants. When first introduced the colours were very few and poor, and the habit was anything but graceful, and, consequently, the plant was thought but very little of. Thanks to that enterprising firm, Messrs. Veitch and Sons of Chelsea, who have done so much to popularise and bring it before the general public, almost every shade of colour is now to be seen, the flowers are much enlarged, and the majority of the plants produce long foot-stalks, which render them extremely useful, not only as plants for the show-house, but for all kinds of house decoration when in a cut state. When suitably arranged they make delightful dinner-table decorations. The flowers remain in a fresh condition for a considerable time in a cut state.

When they receive proper cultivation, the plants are most floriferous, and will continue to flower for at least nine months out of the twelve. A common mistake is that they are treated too much like stove plants, and when such is the case the plants quickly become exhausted, have a weedy appearance, and the beautiful colouring of the flowers never attains perfection. For many years we have grown these plants at Aldenham in considerable numbers, and have attempted much in the way of hybridising, meeting with a good share of success. The principal aim I have had in view is to improve the constitution of the plant, the colouring and shape of the flowers, and last, but not least, the length of stem for cutting purposes. Many of the flowers of our varieties now, when well grown, attain a height of 9 inches to 12 inches above the foliage. Though these plants may be grown on for a number of years, I find the best results are obtained by renewing the stock every second year.

Seed-Sowing.—Seed should be sown at once in well-drained pots or pans in compost of a light, porous nature, which must be made moderately firm. The seed, which is very minute, ought to be handled most carefully, and scattered thinly and evenly over the surface. The smallest possible amount of very fine silver sand should then be dusted over it and the pots stood in a vessel of water up to their rims, so that every particle of soil becomes moistened. A sheet of glass should be placed over each pot, which ought to be stood in a shady part of a warm house in a temperature of about 60° to 65°. Very little water will be required till the seedlings make their appearance, but the soil should never be allowed to become dust dry, and extreme care should be exercised in applying the water. One need not be over

anxious as to the germination of the seed, as this takes place very slowly. Immediately the young plants are discernible, the pots should be elevated on a shelf near the glass in the same temperature.

Pricking - Off Seedlings.—Immediately the young seedlings are sufficiently large to handle, they should be pricked off into shallow pans or boxes, which must be thoroughly drained, using a mixture of one part fibrous loam, one part peat, two parts well-decayed leaf-soil, and one part coarse silver sand.* This should be made moderately firm and the young plants handled with great care. These may be placed and grown on in a temperature much the same as advised for raising the seed, but it is important that they should be shaded at all times from the direct rays of bright

near the glass as possible. Great care should be exercised in watering, and fire-heat should only be applied during very dull days and cold nights.

Established Plants.—After deciding on those that are to be retained, they should be placed in a cool house and given a season of rest, when they may be potted up and started into growth in a gentle heat during the month of February. The pots we find most suitable are 5-inch and 6-inch. Again, these should be well drained and the drainage made perfectly secure by placing good, clean fibre from the loam-heap over the same to prevent the soil mixing with it. For this potting use two parts fibrous loam, broken up into small pieces, one part peat and one part leaf-mould, well decayed. Add sufficient silver sand and finely-broken potsherds to ensure water passing through speedily. A little fine charcoal is also beneficial. Pot firmly and give the plants a good start in a warm house, after which they should be removed into a small span-roofed greenhouse, and, if possible, devote this entirely to them. Maintain a greenhouse temperature all through the summer months, and immediately the plants commence to flower, weak manure-water should be given at every alternate watering. Abundance of air should be admitted whenever the weather is favourable. The plants must never be syringed overhead, but during hot days the paths and stages should be kept constantly damped, and unless it is the intention to save seed, the old flower-stalks should be removed as they go past their best.

Propagation by leaves can also be successfully carried out in precisely the same way as practised with *Gloxinias*; but this is only to be recommended in the case of very choice varieties, as much better results are obtained from plants grown from seed.

EDWIN BECKETT.

Elstree, Herts.



NARCISSUS BULBOCODIUM MONOPHYLLUS IN THE ROCK GARDEN.

sunshine; and, indeed, it will be well to mention here that at all periods of their growth shading must be applied during bright sunshine.

Potting-Off Young Plants.—By the middle of June the young plants should be sufficiently advanced for transferring to 3-inch pots, which must be thoroughly cleaned and well drained, using the same kind of compost as previously advised. Slight fumigations with XL All should be given frequently to keep in check the attacks of green fly, to which this plant is particularly susceptible. The best position for the plants after this period is a heated pit, standing the plants on a bed of finely-sifted cinder-ashes as

known under the name of *Narcissus Clusii*, hails from the north of Africa, and comes into flower in our gardens very early in the New Year. Its leaves, as will be seen from the accompanying illustration, are grass-like and inconspicuous, while from their base rise, on slender stalks, the nodding pure white flowers. Coming at a time when we generally experience inclement weather, it is certainly advisable to give the plants a sheltered corner in the rock garden, and to place over the opening flowers a piece of glass to throw off the rain. The position also should be a very sunny one, where during the resting season the bulbs will be thoroughly ripened; at the same time, the

ROCK AND WATER GARDEN.

THE HOOP-PETTICOAT DAFFODIL.

(NARCISSUS BULBOCODIUM MONOPHYLLUS.)

THIS charming little white Hoop-Petticoat Daffodil, sometimes

plants require ample moisture when about to flower. Almost pure sand is usually recommended as the most suitable soil for this plant, and, following these directions, I have been successful, as is depicted in the illustration.

As most of the bulbs are imported, and, I believe, actually taken up while their foliage is visible, it follows that the crop of flower is not usually very large the first year after planting. If given suitable conditions, however, they should become established and flower more freely in succeeding seasons. It is advisable to plant some dwarf, surface-rooting plant, such as *Arenaria balearica* or some of the small *Sedums*, over the place where the bulbs have been inserted, so as to clothe the soil and prevent dirt being splashed on the flowers. If glass protection is afforded them, it is surprising how long many of the blossoms will last. I noted one especially of the flowers in the group illustrated on page 94, and it was in good condition for nineteen days after opening. This in early January was very acceptable. One sometimes hears gardening acquaintances say that these winter-flowering plants are "not worth while," since they are so soon damaged, while the garden is usually not sufficiently attractive during the winter to induce them to visit it. Personally, I find one of the greatest charms of an alpine garden to lie in the fact that, no matter when one goes into it, there is always some little treasure just peeping out to welcome one. I readily grant that during the "dead" time of the year the amount of flower is small; but when it consists of such charming little visitors as the one under consideration, it appears to me almost sacrilege to even mention the words "not worth while."

REGINALD A. MALBY.

RAMONDIAS IN THE ROCK GARDEN.

RAMONDIAS belong to a Natural Order (*Gesneraceæ*) that is sparingly represented among hardy plants. Although the members of the genus are few in number, they, nevertheless, rank among the choicest and most distinct of rock plants. They are readily recognised at all seasons by the broad, expanded, rugose leaves, that rest close to the ground in the form of a rosette. In habit they are exceedingly neat, and, being evergreen, are not without interest even when out of flower.

The Best Situation.—Owing to the leaf arrangement there is always a danger, in level planting, of the centre of the plants becoming silted up with soil, which not only detracts from their appearance, but is also liable to cause decay to the plants; hence, in all practical planting, the best results invariably follow where they are given a more or less vertical position in any good wide joint between stones or rocks. Not only does this arrangement suit them culturally, but from a decorative aspect it increases their effect, and the leaves are always bright and clean. *Ramondias* love shade; hence they are ideal subjects for the north side of the rock garden or, indeed, any such position where they do not receive direct sun. Shady dry walls, for

example, claim no more charming subjects for their adornment than *Ramondias*.

The Best Soil.—They are not over-partial as to soil, provided it is of good depth and capable of supplying moisture even in the driest periods. I have had plants growing in soil composed chiefly of peat and loam, and, again, in soil that contained a large amount of chalk, and in each instance growth was vigorous and the plants flowered freely. The lasting qualities of the flowers were most in evidence when the plants received no direct sunshine. There are two species. *R. pyrenaica* produces purple violet flowers on stems some six inches in length, the flowering season being May and early June. Of this species there is a white-flowered variety, and when quite pure it is a charming and welcome addition, although the best form is rather rare. *R. serbica* is a later-introduced plant, the flowers being paler in colour,



RAMONDIAS IN A SHADY ROCK GARDEN.

almost lavender, and having the petals more founded at the points than those of *pyrenaica*. The variety *Nataliæ* is undoubtedly the prettiest of the genus, the colour being intermediate between *serbica* and *pyrenaica*.

Propagation.—*Ramondias* are propagated by division and seed. With the latter method strong flowering plants are obtained in the third year. Seed is sown as soon as ripe in well-drained pans, and the seedlings grown in a cool structure till the following spring, when they are transplanted into pans or boxes and grown in an unheated frame till such time as they are large enough for permanent planting. They also adapt themselves to pot or pan culture, and when grown to specimen size they are most desirable subjects to flower in the alpine-house in spring.

Coombe Court Gardens.

THOMAS SMITH.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

THE Carnation is a plant of never-ceasing glory in these times. From the earliest to the latest days of the year it is not merely possible, but comparatively simple, to have beautiful blooms, provided, of course, that all the principal sections into which the plant is divided are well represented. The amateur, however, has usually to rest content with flowers in the summer months and some blooms from the *Marguerites* in the autumn.

Plants in Frames.—Although the Carnation is indisputably a perfectly hardy plant in its older varieties, it is equally certain that many of the modern sorts are weaker of constitution, and it is therefore deemed wise by many cultivators to

keep at least a proportion of their stock in cold frames through the winter. In gardens which lie rather low, and where the soil is close, strong and cold, this system is wise; but where the conditions are more favourable, it is doubtful if the additional trouble thus involved is ever fully repaid. Provided that the plants are hardily grown by keeping the soil on the dry side and admitting as much air to the frame as possible, there will be little weakening; but when the plants are in the slightest degree coddled they suffer severely, and it is only when the utmost care is exercised that they move safely to the summer beds and borders. Now they will be decidedly on the move, and before another month has passed, or at latest by the end of March, the plants ought to be in their flowering quarters. To favour success, see that the lights are never closed; on the contrary, take them right off

whenever possible. More water will have to be given, as the roots will be reassuming activity, and they must receive gentle encouragement.

Plants in the Garden.—The young plants which were rooted from layers pegged down last July, severed from their parents as soon as they were ready and planted in their flowering positions, will be in splendid health if the sparrows have not managed to strip them entirely of leaves. At all times this bird is partial to the Carnation, and stout thread must be used to circumvent it. To admit air to the roots, the surface must be constantly open, but in pointing over it is important that the roots shall not be injured or disturbed. The mulching of manure that is often applied this month or in March will prove more beneficial if it is delayed until the middle or the end of April, when the roots are fully active and the plants demand food.

Sowing Seeds.—When one desires to perpetuate a particular variety, propagation must be done by layering; but raising plants from seeds is full of interest, and the most reputable merchants have now such splendid stocks that one is practically certain to secure a few varieties of conspicuous merit from each packet. And if this is not the case, the plants grow so magnificently and flower so freely that they are grand ornaments for the garden, and invaluable for the provision of armfuls of cut blooms. Those who have a greenhouse and a frame should sow seeds now, while those who have only the latter convenience will be wise to wait another month or so. In the former event the plants flower the same season, but in the latter the majority do not. Pans or boxes of light, sandy soil should be prepared, the surface made firm and level, and the seeds set 3 inches apart to obviate the necessity for thinning and to ensure sturdy progress from the start. The soil must be kept pleasantly moist, when the seedlings will soon appear. F. R.

THE JAPANESE IRIS.

(IRIS LÆVIGATA OR KÆMPFERI.)

As the planting season of this charming flower is at hand, perhaps these notes as to its cultivation will be welcomed by many readers who contemplate growing a few, and to others who

have not been successful with them. The chief requirements of these plants are a deep, rich rooting medium, which must be kept very wet from the time growth commences in spring until it begins to ripen in the early autumn; after then less moisture is required. The ideal situation is at the margin of a pond or stream, exposed to the full sunshine. Here the plants soon become established and increase very freely. Such situations, however, are not always available to the would-be

out, puddle the bottom with clay, and then fill up again with a compost consisting of good, rich loam to which has been added one-fourth of peat. If the loam is of an adhesive character, so much the better, as it will have the advantage of retaining the moisture better during the summer. Planting should be deferred until the soil has had time to thoroughly settle down; but if the roots arrive before the bed is ready for their reception, they should be potted and kept in a cold frame until

they commence to grow, when they may be transferred to their permanent quarters. As soon as growth starts in spring, and until they flower, the bed should be occasionally flooded to keep it in a semi-aquatic condition; but after the flowering period is over, less water is needed. During the winter I advise covering the bed with dry Bracken fronds to afford a slight protection; not that a few degrees of frost would injure the crowns, but during severe weather considerable damage is often done, the result of which is stunted growth and very few flowers during the next season. When this covering is removed in early spring, the bed should be top-dressed with some rich soil and leaf-mould. An occasional watering with liquid cow-manure is very beneficial when growth is commencing. There are such a number of named varieties that it is difficult to make a selection, but some beautiful flowers may be obtained from the mixed or unnamed varieties of these charming Japanese plants. A. M.

SWEET PEA MARJORY LINZEE.

WHEN this Sweet Pea was first shown by Mr. C. W. Breadmore about three years ago it met with a very hearty reception, its delicate beauty appealing to all lovers of the Sweet Pea. Since then it has been grown in most gardens, and both for exhibition and garden decoration has

been very highly appreciated. Unfortunately, it is one of those varieties which have proved exceedingly difficult to fix, and it is seldom that a true strain can be obtained. Notwithstanding this, it is well worth growing, as a good percentage now come true, and these are, as already stated, very charming indeed. The colour is bright rose, slightly suffused with salmon, a combination of colours that gives quite a unique effect.



SWEET PEA MARJORY LINZEE, A BEAUTIFUL BRIGHT ROSE VARIETY FLUSHED WITH SALMON.

grower; but by selecting a spot which is naturally moist, but not heavily shaded, a suitable place can soon be made for them at very little expense.

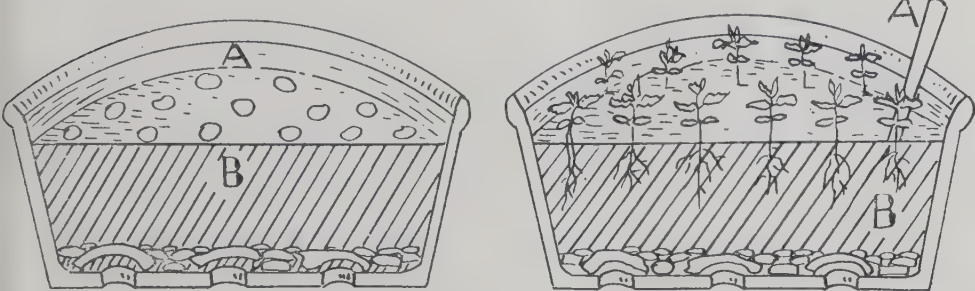
Having decided upon the size and shape that the bed is to be, take out all the soil to a depth of from 2 feet to 3 feet. If this soil is of a rich, loamy character, the greater part of it may be saved for making the new bed, but nothing but the best material should be used. When the bed is cleared

GARDENING FOR BEGINNERS.

TOPICAL NOTES ON TOMATO CULTURE.

AN inexperienced amateur will be able to grow good crops of Tomatoes if he faithfully follows these simple instructions and carefully studies the illustrations.

Sowing Seeds.—Seeds should be sown thinly in shallow pans or in flower-pots. The soil must be made up of fibrous loam



HOW TO SOW SEEDS OF TOMATOES AND PRICK OFF THE SEEDLINGS.

and leaf-soil in equal proportions, with sand to ensure porosity. The soil should be in a medium state of moisture, then water will not be required before the seeds germinate. When it is needed, immerse the pan in a vessel of tepid water, and let the moisture soak the soil from the crocks to the surface. Do not cover the pan with glass or paper, as such coverings tend to weaken the seedlings. Place the pan in a warm corner of the greenhouse or heated frame, and when the seedlings appear, allow all the light and warmth possible to reach them.

Transplanting the Seedlings.—This work ought to be done while the seedlings are small, so that they may be kept sturdy. It is well to first transplant them 4 inches apart in pans or boxes, and then pot them singly in 3-inch pots. Loam two parts, leaf-soil one part, rotted manure and sand one part, form a good soil mixture. Make the soil firmer at each potting, so as to induce a short-jointed stem. A fairly high temperature and a dry atmosphere suit the plants best. A close, moist atmosphere is conducive to disease, and plants subjected to such do not fruit satisfactorily.

The Final Potting.—The soil for this potting must be coarser, but it should be well firmed. It is not necessary nor advisable to fill up the pots; space should be left for a surface-dressing of good loam and manure. Use 10-inch pots. When planted in borders, inside or outside, do not put in any manure, and make the soil very firm.

Watering and Feeding.—Sufficient water must be given to promote healthy growth; excessive watering is harmful. Feed the plants when two or three trusses of fruits have formed. Weak manure-water may be applied occasionally, but a teaspoonful of superphosphate given to each 10-inch pot once a fortnight and well watered in will do a lot of good.

Training.—Keep the plant to one main stem, and regularly remove all side shoots as soon as they appear; they grow from the axils of the leaves on the main stem.

Position.—Both inside and outside a south aspect is the best. If this is not available, select a south-east or south-west one.

The Illustrations Explained.—Fig. 1 shows, at A, seeds sown on the soil B in a pan. Cover lightly. Fig. 2 shows resultant seedlings being lifted by the aid of a pointed stick at A, so as to take out all roots from the soil B. Fig. 3 shows how to pot a young plant, and Fig. 4 how to finally pot a large plant. A, space left for top mulch. B, a turve placed under each pot, so that roots may enter it as denoted by the arrows. Fig. 5 shows the stage of growth when feeding may commence. Some trusses of fruits are formed. G. G.

ROSES IN LATE FEBRUARY.

PLANTING may yet be done, but, if dry, water frequently. The plants should also be hard pruned before

planting. Cut Tea Roses back to 3 inches or 4 inches or less. They are sure to grow well if the roots and growths are healthy. Pruning should be finished by the second week of March. In the North the third and fourth week will do. Prune all now except the Teas, Polyanthas, Noisettes and Chinas. After pruning, dig the land thinly. The best plan is to lightly prick it up with a fork. On no account dig deeply, for the feeding roots run close to the surface. If ground has been well prepared, avoid mulching beds with manure, as this mulch shuts out both sunshine and air. Mulchings are only beneficial during hot days when plants are growing fast, and a good loose blanket of earth is better than all the mulchings with manure. Dwarf stocks for budding should now be planted. Where the pegging-down system is adopted with vigorous-growing Roses, some of the ripest and longest growths should not be pruned. Do not, however, bend them down until April.

A FINE WINDOW PLANT.

WELL-GROWN plants of *Calceolaria amplexicaulis* in pots grow to a height of about two feet; in 6½-inch pots young plants will grow to a height of 18 inches in one season and bear a great number of flowers. The chief difficulty in growing these plants in pots is experienced in the work of potting and getting the specimens established in the soil, as they sometimes die suddenly through stem decay. Young plants now growing in small pots must be repotted before they become too much pot-bound. If they are buried just the same depth again in the compost in the larger pot and very carefully attended to as regards watering, steady and healthy growth will

result. Young plants lifted from a bed of soil in a frame are more difficult to manage. On no account must they be potted deeper than when they were growing in the frame soil, and, after potting is done, return the plants to the frame, leaving them there for about twenty days, all the time watching them carefully so as to ventilate and give water at the right time.

These plants do remarkably well in windows facing the east, west and north-west. If the young plants are bushy, they may be allowed to grow and form branches naturally; but if now somewhat thin and spindly, pinch out the point of the main stem directly the plant is established after a re-potting, and then side branches will result. Fibrous loam and leaf-soil in equal proportions, with a small quantity of rotted manure and some coarse sand, form a good compost. It is best to add rotted manure to the compost at first, and not feed the plants with liquid manure nor chemical fertilisers later on. AVON.

THE LABURNUMS.

PLANTED with discretion, the Laburnums produce delightful pictures in the garden. In spring and early summer, when the long, drooping racemes of *L. vulgare*, the common kind, are at their best, few small trees are more graceful. In addition to the perfect hardihood and accommodating nature of the Laburnums, there is scarcely a soil or position in which they will not grow satisfactorily. *L. alpinum*, known also as *Cytisus alpinus* (the Scotch Laburnum), is a fine tree for decorative planting. It flowers late, and is of great value for this reason; it grows 20 feet high. The variety *autumnalis* flowers, as its name indicates, in the autumn, and *Parksii* is another excellent form, with slender racemes of flowers often 1 foot long. *L. Adamii* is a interesting plant bearing dull purplish flowers. It is a remarkable graft-hybrid, obtained by shield-grafting *Cytisus purpureus* and *L. vulgare*. The strange thing about it is the complete reversion of some parts of the same tree to one or the other parents. It is said to have been raised by Jean Louis Adam in 1825.



POTTING ON AND PLANTING OUT TOMATOES.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Rose Garden.

Roses of the Tea section that were provided with temporary protection, such as hay or Bracken, during the severe weather should have this now removed and stored in the dry.

Pruning.—Roses of the climbing section may now be pruned. This consists chiefly of thinning out the growths where too crowded, retaining as far as possible strong young shoots and removing the older growths and weakly ones. Any supports that are not likely to remain firm during the coming season are better replaced with new ones before the growths are tied up into position.

Trees and Shrubs.

Complete the Planting as soon as possible and fork over between the shrubs. Allow the ground to remain exposed for a week or two, when it can be broken down and made neat and tidy.

Ampelopsis and Ornamental Vines.—These require pruning annually, otherwise growth is apt to become congested. Remove any weak, half-ripened shoots and, except where required for extension, prune much the same as recommended for fruiting canes.

Clematises.—The various sections of these require somewhat different treatment as regards pruning, according to the mode of flowering. *C. montana* and its variety *rubens* produce flowers from the previous year's growth, and require but little pruning. *C. Jackmanii* and varieties require the old growths laid in thinly for covering. *C. Flammula* needs but little pruning, except when encroaching upon other subjects.

The Flower Garden.

Spring Bedding in some localities has been affected by the frost, and *Myosotis* have suffered worst. Make good as soon as possible, firm the plants and aerate the soil.

Border Carnations should be examined and made firm at the base, and, as soon as the ground permits, use the Dutch hoe after a dusting of soot. Those wintered in cold frames should have all the air possible, and may be planted when convenient.

Montbretias.—Where it is customary to lift the corms of these annually—and on our heavy, cold soil we deem it advisable—these will shortly need replanting. Well work the soil and enrich it with manure and other decayed refuse of a light nature.

The Kitchen Garden.

Culinary Peas.—The earliest batch raised in pots or boxes as recommended for planting out must now be thoroughly hardened off preparatory to doing so. Remove the lights entirely whenever the weather permits. The same remarks apply also to Sweet Peas, especially those sown in autumn for the earliest supplies of flowers.

Spinach.—Make a sowing of this crop in a warm position in the garden. Sow in drills 1 foot apart, not too thickly. The Carter is an excellent variety, and so is Victoria.

Tomatoes.—A sowing of these may now be made in a gentle heat for producing the main crops of fruit. Within the next week or so sow seeds of a free-cropping variety for fruiting out of doors. The seeds may be sown thinly in pans or on the surface of fine soil in 6-inch pots. When germinated, elevate near to the glass, and always endeavour to promote a sturdy growth by admitting air to the structure when the weather permits.

The Fruit Garden.

Peach Trees.—Look carefully to the condition of these at the root. They should never be allowed to become dry. Fumigate with a mild application just before coming into flower to prevent the trees becoming infested with aphids. Those in late houses should have all the air possible.

Strawberries.—Introduce fresh batches of plants to cool quarters, and those starting away nicely may be subjected to more heat. Elevate near to the glass and pollinate the flowers artificially. Except while in flower, syringe the under-sides of the foliage especially with tepid water.

Raspberries.—If the old canes that bore the fruit last year have not been removed, do so at

once, cutting clean from the base. Whether grown singly to a stake or in rows—and I think the latter is preferable—last year's growths should be tied up. When the last-named method is adopted, two stout stakes are required, if only for a short row, and wires stretched between them; then the canes can be crossed diagonally.

Plants Under Glass.

Callas or Arum Lilies that are now throwing up their flower-spikes and are growing freely will need copious waterings, and will be greatly benefited by occasional doses of liquid manure-water.

Hippeastrums or Amaryllis.—Start a few of these, and, if possible, plunge the pots in a mild hotbed. If the bulbs were potted last year, a top-dressing only will be needed now.

Crotons.—The best method of increasing is by ringing, that is, selecting well-furnished growths and then twice cutting round the stem through the bark about a quarter of an inch apart and removing the soft layer. Bind up with some long moss, with which has been mixed a little silver sand, and keep syringed, when roots will soon be emitted.

Tree Carnations.—Pot off singly cuttings that have rooted, and grow on as sturdily as possible. The present is a good time for inserting a large batch for winter flowering. Those now blooming will be greatly benefited by a small sprinkling of Carnation manure on the surface after first loosening the soil. A suitable night temperature is 50°.

Half-Hardy Annuals.—There are many that should be sown without delay. Raise the seeds in a gentle heat in pans or boxes, and transfer when germinated to cooler quarters.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Greenhouse.

House Plants.—Wipe with a dry cloth the leaves of house plants when dusty.

Camellias in bloom must have abundance of moisture at the root.

Bouvardias.—Cut the roots into 1-inch lengths, insert in sandy compost and start in heat.

Cannas.—Shake out those wintered in pots, divide and repot, using a rather rich compost of rotted turf and Mushroom-bed refuse.

Double Begonias.—Remove tubers from pots. Arrange them on a layer of leaf-soil in wooden trays, keep moist until growth commences, then repot. Much heat is prejudicial, but a little at first is an advantage.

Fuchsias wintered in cutting-boxes should be transferred to 4-inch pots, using an open, highly-manured compost. Shake out old plants that have started slightly into growth, trim the roots and repot in pots of smaller dimensions.

Geraniums.—Autumn-struck plants wintered in boxes must now be placed singly in pots 4 inches or 5 inches in diameter, according to the variety and strength. Drain with rough leaf-mould or Coconut fibre refuse only to facilitate planting. Keep the plants rather close and, if possible, in a warm temperature for a few weeks, and always be cautious in the application of water.

Zonals for Winter.—Cuttings to provide plants to flower next winter are now ready. Select clean, not over-strong shoots and insert them singly in 2½-inch pots in a sandy compost. They strike root freely in a temperature of 55° to 60°, and should be repotted as soon as well rooted. The best of the plants that have been flowering during the winter, if repotted into 8-inch pots, are useful during summer for various purposes.

The Kitchen Garden.

Cucumbers.—Sow more to succeed the earliest batch.

French Beans.—Osborne's Forcing is a good sort. Sown in 6-inch-deep boxes, the seeds at 6 inches apart, they will provide nice pickings.

Seakale that was placed under a cover of cinders, sand or Coconut fibre will now be growing freely, and should be examined at brief intervals, cutting the more forward.

Onions.—Those who grow Onions from seeds sown out of doors should now prepare the ground by adding some well-rotted manure and pointing it into the surface; then firm the ground, draw shallow drills at 12 inches apart and sow the seeds thinly. After filling in, rake the surface.

Globe Artichokes.—Dig deeply between the plants after cleaning decaying material from about them. They appreciate very heavy dressings of cow-manure, but in soils of a retentive nature any kind of light material, such as leaves, litter, &c., may be dug in, with the best results. The planting of new plantations may be left till a few weeks later.

Jerusalem Artichokes.—Delay no longer the planting of these. No vegetable exhausts the soil of manure so thoroughly as these, and therefore a 6-inch layer should be incorporated with the soil well below the tubers, which should be placed 6 inches below the surface. Double rows at 15 inches apart, alternating with 4-foot spaces, give ample room.

Mushrooms.—If space in the Mushroom-house is exhausted, a bed may be made up in an open shed, either on the flat or ridged. It is important to keep a covering of dry straw constantly over the bed from the time it is spawned and earthed, in order to retain heat and preserve the surface moist without having to apply water.

The Flower Garden.

Violas.—Plant out well-rooted Violas in manured ground, making it quite firm to encourage bloom.

Double Daisies.—Groups of double Daisies not broken up in autumn should now be seen to, dividing them singly and replanting a few inches apart.

Sweet Peas.—Well-established Sweet Peas in pots should have all the air possible, putting the sashes over them only when raining, in time of frost, or to shelter from cold winds. Each plant should be tied to a slight stick.

Gladiolus.—Last year furnished quantities of seed, which should now be sown in boxes and started in a mild heat, the soil to be kept moist always. Subsequent to germination grow the plants rather coolly and transplant into the garden in May, where they will form moderate-sized corms. The bulbets of old corms may be treated in the same way.

Eremurus.—Beds of seedlings should be cleaned of weeds now that all the plants are pushing up, and about half an inch of rotted compost laid nicely over all. Where morning frosts are severe, a few Spruce branches placed over them will keep them snug.

The Fruit Garden.

Pears.—If it is proposed to regraft any Pears, now is the proper time. Instead of using the old-fashioned clay mixture to exclude air, substitute for it Mastic L'Homme Lefort, which is clean and easy to apply. I use a piece of flattened wood, wetted, as a spatula, and smooth it over the scion and stock with wetted fingers.

Peaches.—Those trained on walls must be pruned and renailed without delay. As far as possible lay in only young and well-ripened shoots and allow each plenty of space; 5 inches or 6 inches apart is none too much. The flowers expand early on warm south walls, and where they are protected by glass copings or other means, these should be got ready for use.

Morello Cherries.—These are generally trained on north walls and left to the last. They may be pruned and renailed any time from now, and, like Peaches, should have as much young wood as possible laid in, but a spur here and there need not be objected to. I grow several trees as standards, and these need to have the shoots thinned annually.

Outdoor Strawberries.—Young plantations may be made now or as soon as the ground is in a fit condition. For ordinary purposes and according to the variety, I plant in rows 3 feet apart, the plants 18 inches apart for rank growers, and 2½ feet in the rows and 1 foot apart for others. President is representative of the former and Vicomtesse H. de Thury of the latter. The plants can hardly be made too firm in the soil. Those planted in August or September last will probably need cleaning and afterwards made firm.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

HOW TO OBTAIN EARLY TURNIPS.

IN French gardening or intensive culture forced Turnips should find many patrons, as the small, sweet roots early in the spring are more appreciated than at any other period of the year. Few vegetables force more readily. At no time, however, must there be excess of heat, as this causes the plants to bolt prematurely, but there must be ample moisture and ventilation later on. I have always obtained the best results from a bed of leaves and litter covered with 6 inches to 9 inches of fibrous soil, and this enriched by decayed manure or quick-acting fertilisers. Seed sown in February will give nice, small, sweet roots in six weeks if given a little bottom-heat, and two or three weeks longer in ordinary cold frames.

At the start there must be ventilation day and night to allow rank steam to escape, and sowing should be deferred till the heating materials are cooling down—under 80°.

Varieties are not numerous. Carter's Early Long Forcing is an ideal root, and may be had fit for table under two months. Sutton's White Gem is also a splendid forcing Turnip, and either for frames or early borders in the open it is the most precocious root grown; unlike the round roots, it does not bolt rapidly, and is of splendid quality. I have sown this in the open protected with litter, and obtained good roots in two months. The older Early Milan type is likewise very early; this has a flattish root. There is also a red Milan, but the quality is inferior to the long roots. For succession there is no variety that can equal Snowball. This is excellent and more solid than other early sorts, and for cold frames or early borders is splendid.

G. WYTHES.

EARLY CROPS OF CUCUMBERS.

EARLY Cucumbers are always much appreciated, especially by amateur cultivators; but those who are unable to command a fairly high temperature by artificial means should not sow seeds too early, as Cucumber plants rapidly fail if subjected to a cool temperature in spring.

If plenty of heat is available, seeds may be sown at once in heated pits or houses, which are the best for the plants at this season. Where there are hot-water pipes under the bed, it will be well to place a layer of broken bricks on them and one of chopped turves prior to putting on the prepared compost. If the latter comes into direct contact with the pipes, it gets very dry at times, no matter how carefully the work of watering is done, and then the roots perish; this leads to a check of plant growth, lessens the number of fruits and impairs the quality, causing them to be extra bitter in taste.

Fibrous loam and sweet leaf-soil in equal proportions should be used to form the body of the compost, and to each bushel add an 8-inch potful of rotted manure. Put this compost in a layer 9 inches deep over the chopped turves. In the meantime sow the seeds singly in small pots in loam, leaf-soil and sand. Bury the seeds 1 inch deep and place the pots rim deep in sifted leaf-soil or Cocoanut fibre in a box. If the box is placed in a warm position, light but free from cold draughts, young plants will be available for the beds in fourteen days.

Put out the plants 3 feet apart, train to stakes and to roof wires in the houses, and on the surface

of the bed in heated pits. When the main stem has grown 3 feet long, pinch out the extreme point, and thus cause side shoots to grow, which must, in due course, be stopped beyond each cluster of fruits which show.

Surface-dress with a thin coating of rich loam and manure directly the roots show, and repeat the dressing in due course, feeding also in the meantime. A temperature of 68° at night and 10° higher in the daytime will be suitable.

In frames on hotbeds it will be quite soon enough to make up the hotbeds about the middle of March. Make the bed 18 inches wider each way than the frame which is to be placed on it. Mix some tree leaves with the littery manure, if available, and make the bed nearly four feet high, putting on the material loosely. The frame, compost, and heating of the material will cause the bed to sink down to half the height it was when first built. A similar compost and other treatment regarding the watering, top-dressing and feeding, as recommended in the case of plants grown in heated houses, may be the rule in the case of plants in frames. It is, however, advisable to leave a small opening at the top of the lights night and day to let out rank gases, and to cover with mats at night.

B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

PINK BEDDING GERANIUM (E. A.).—A particularly good pink-flowered bedding Geranium is Beckwith's Pink, known also as Mrs. Robert Hayes. This and other bedding varieties can be obtained cheaply from Messrs. H. Cannell and Sons, Swanley, Kent.

PEGGING DOWN SWEET PEAS (K. E.).—Let us at once say that the very thought of pegging down Sweet Peas does not commend itself, and we do not think for one moment that anyone who adopted the system would be satisfied with the results. To peg down the strong shoots of Roses is one thing; to peg down the comparatively weak growth of Sweet Peas is another thing. The shoots would become a more or less tangled mass, whence would spring the blooms on short stalks, except in such positions as the light pulled them up, and even then they would be neither long nor strong. To your questions numbered respectively 1, 2 and 4, the answers are in the negative; to No. 3, the grass would not prejudice the Sweet Peas, but the Sweet Peas would prejudice the grass. If you decide to try the experiment, will you be so kind as to send a report of the result achieved to the Editor?

SUMMER BEDDING (L. C.).—You do not say if you have any plants whatever that might be used for furnishing your flower-beds, as, if you have, some may possibly be utilised for the purpose. The position of the beds and their arrangement is also a very important matter, and it appears to us that if the odd bed in the seven occupies the most central position, it might be planted with taller and more imposing subjects, and thus form, as it were, the *pièce de résistance*. From this the six other beds may be planted in pairs, those furthest from the centre being occupied by the shortest plants. Pelargoniums, tuberous Begonias and Lantanas are all, we believe, rabbit-proof, and the beds might well be planted with these. We saw last year some very effective beds in a particularly hot and dry situation. They were simply sown with the best varieties of *Eschscholtzia californica* and Marigolds. We do not, however, think these plants are rabbit-proof. No doubt the excessively hot and dry

weather experienced last summer and early autumn caused the death of your Forget-me-not plants.

ANNUALS FOR BORDER (T. M. C.).—It is unfortunate that you give us no idea of the size of the border, upon which so much hangs. Any of the following are good and serviceable for freedom of flowering and decorative effect. Those marked by an asterisk transplant quite well; the remainder would be better sown in their permanent places in early March and attended to later in the matter of thinning. *Asters of all sections, though preferably such as Comet, Ray, Ostrich Plume and Victoria, all of which may be had in rose, pink, violet, white and other shades; *Ten-week Stocks, Marigold Orange King, *Godetias of sorts, Nigella Miss Jekyll, Poppies in variety, Mignonette, Candytufts, *Linum rubrum*, *Gaillardia picta lorenziana, *Eschscholtzia* Carmine King, **Dianthus Heddewigii* in variety, **Chrysanthemum carinatum* and **C. coronarium* (both in variety), Sweet Sultans, Calliopsis, Dwarf or Tom Thumb Nasturtiums, **Phlox Drummondii* and *Nemophila insignis*.

PLANTS FOR BEDS (M. J. McC.).—Seeing that you desire the beds to be gay in May and June, we think you would best secure the object in view by planting for another year at least an arrangement of Cottage and Darwin Tulips, both of which, by reason of their tall habit and stately bearing, would be fitting associates for the other plants named. These plants, however, would only carry the season of flowering into the middle or end of May, unless you took the precautionary step of cold storage or something akin and planted a second batch of the Tulips at the end of the year or even early in January. In conjunction with the Tulips you might arrange *Lilium umbellatum* and other kinds to afford the requisite succession of flowers. Were it an ordinary position, we would suggest *Azalea mollis*, with Daffodils, Tulips and Lilies; but we fear the heat would be too much for some of these. As you have the Lilies in position, you might for this year try a mixture of *Iris pallida*, I. Dr. Bernice, I. Mme. Chereau and I. Queen of May, interspersed by good-sized plants of the long-spurred Columbines, which are at all times very pretty and effective.

PLANTS FAILING (L. M. J. M.).—Roses generally with fair treatment do remarkably well, but when such a vigorous sort as Gloire de Dijon fails, we conclude at once that the cause is lack of cultivation. For the wall and aspect you mention there is no finer plant than *Wistaria sinensis*, though we feel sure that several of the *Ceanothus* would do uncommonly well and require less attention than the *Wistaria*. One good, well-trained and well-flowered plant of this latter would, however, become a feature, provided always that well-established plants have been secured and that the planting was well done. For such a soil as is usual in your district, the addition of sand, leaf-mould, burnt earth and manure and deep cultivation are essential, and, given these, we should have little fear of failure. The four years of struggle and failure are the best proof that drastic treatment is necessary, though just what is needed can only be determined on the spot. Until the present crop of snails and slugs is reduced to reasonable numbers or eradicated altogether, there is little good in attempting the cultivation of alpine and rock plants. Snails may soon be reduced by hand picking, while thousands of slugs may be cleared off by the use of some of the soil fumigants now in vogue. We commend these to your notice.

TYPES OF CARNATIONS (T. S. B.).—You ask us to define the different types of these flowers and give their several treatments. We propose dealing with the former now, and a little later the latter, which will also be of interest generally. The perpetual types are those which, having produced flowering stems, also produce lateral shoots or growths, and, these proceeding to a flowering, perpetuate the plants, as it were; hence the name. This type has also been called "Tree" because of the ascending character of the growth. Border Carnations, on the other hand, while being somewhat hardier, produce all their shoots in a more or less procumbent manner on the ground, and produce a solitary flowering each year. The Malmaisons are big-flowered, broad-leaved forms of these latter, and probably descended from them as a seed sport or something akin. They are generally less hardy than border varieties, and require greenhouse treatment throughout. The Malmaisons only give one flowering each year, though where many sorts are grown and large numbers forced, it is possible to obtain flowers over a prolonged season. The result of potting border Carnations in spring and discouraging their flowering would simply make of them larger plants, and, grown under glass, might cause them to flower earlier the following year. It would not, however, make them winter flowering.

WALL GARDENING (E. M. B.).—There are quite a number of plants adapted to this phase of gardening, and plants that are suited to sun or shade. Unfortunately, you tell us nothing about the wall, its extent, height, construction and, most important of all, what provision in the shape of soil has been made for the plants. These, indeed, are the things that tell, any selection of plants by comparison being of secondary importance. It is important, also, to know whether the wall is an old, well-built one, which it is desired to adapt to the above-named circumstances, or whether it has been erected specially for the purpose in view. Generally speaking, the former is not good by reason of its dryness, its solidity and the few opportunities that present themselves for plant-growth. The purpose-made wall is another and much simpler thing, and such an one is readily decorated and furnished with plant-life. However, we give you a list of plants, together with some general hints, and if these do not meet your views, please write us again with fuller details: *Achillea umbellata*, *A. Clavenna*, *A. Huterii*, *Aethionemas* of sorts, *Alyssum saxatile*, *A. montanum*, any of the

Aubrietias, the best of all plants for the purpose; *Dianthus deltoides*, *D. cæsius*, *Campanula muralis*, *C. garganica*, *Corydalis lutea*, *Aquilegia*, *Honesty*, *Armeria alpina*, *Iberis sempervirens*, *Edelweiss*, *Zauschneria*, *Encrusted Saxifragas* in variety, and many more. The better way of introducing plants into a wall already built is by small pieces, which, if arranged in colonies, give a fine display. Seeds, too, are also valuable, and these should be first mixed with a little soil.

NYMPHÆA MRS. RICHMOND (A. E. P.).—Yes; this will grow quite well in a tank out of doors if given the same treatment as other outdoor varieties. If you order it from any nurseryman who supplies other kinds of *Nymphæas*, he would obtain it for you if he does not already stock it.

LEUCOPHYTA BROWNII (Mrs. H.).—*Leucophyta* or *Leucophyton Brownii*, which is also known as *Calcephalus Brownii*, is grown by most nurserymen who make a speciality of the better class of bedding plants. It is quoted as plants in the catalogue of Messrs. Cannell and Sons of Swanley, and may also be obtained from Messrs. Veitch of Chelsea. It is sometimes pegged down as an edging when it is but a few inches high, but as dot plants it may be seen from 1 foot to 3 feet in height. The intense silvery whiteness of the entire plant is most noticeable.

INJURY TO SWEET WILLIAMS (L. A.).—The Sweet Williams sent show no sign of having been attacked by a fungus, but rather of having been nibbled at the base of the stem. It is possible that they are "damping off" through being too close together or too sappy when the cold, damp weather caught them, but the specimen is too small for us to be able to say. We suggest that search should be made for the caterpillars called "surface grubs." These are fat caterpillars which are much the colour of the soil, in which they bury themselves during the day and in cold weather and feed on plants, biting them near the surface as the specimens sent seem to have been bitten.

SHRUBS AND BULBS (Mrs. F. U. T.).—The best flowering evergreen you can obtain for the position you mention is *Berberis stenophylla*. Any nurseryman would supply it. Do not, however, obtain large plants, for large specimens do not re-establish well after root disturbance. Plants 2 feet high are quite large enough for permanent planting, and we should advise you to plant a triangle of three if you wish to fill your corner quickly. It will stand both the heat and drought as well as anything you could find. With regard to the second border, where you have spring bulbs, we should advise you to plant it with mixed varieties of *Pentstemons* for the summer. These are showy and possess a long flowering period. A mulch of well-rotted manure and decayed leaves would assist in keeping the ground moist. With regard to the other border, patches of *Tritoma crocosmæiflora* and *T. Pottsi*, with some of the garden varieties, *Snappdragons* and *Aster Amellus bessarabicus*, would be likely to give the desired results. These would flower during August and September.

CAMPANULA MOERHEIMII (M. G.).—This and all the varieties of *C. persicifolia* delight in a moderately rich and deeply-cultivated soil and a position of some coolness, or where the supplies of moisture to the roots of the plants are fairly regular. This tribe of the Bellflower family quickly becomes infested by thrips when planted in dry soils and hot situations. Try the plants in a rich, light soil in a uniformly cool spot. The best time to transplant the *Iris* would be about mid-March, breaking up the clumps into moderate-sized examples and taking care when replanting not to bury the rhizomes or rootstocks. These should be kept quite near the surface. The soil should be light, freely mingled with old lime rubble, and the planting must be very firmly done. Arrange the plants quite near the wall, separating them by 6 inches or so, and fix small blocks of stone between them to wedge them tightly into their places. From your description we think it probable that the *Lavender* requires replanting and fresh soil. This plant is greatly benefited at times by the addition of lime or chalk to the soil, or, failing these, the bed might receive a good dressing of old mortar rubbish. In all probability, were you to dig up the plants, thoroughly trench the soil and freely incorporate some lime therewith, working the soil a few times and replanting in April moderate-sized divisions from your present plants, you would find a great improvement. We note the position is of some dryness, the extremes of which should be modified by occasional watering.

TREES AND SHRUBS.

MAGNOLIA GRANDIFLORA (Dr. J. W. S.).—We cannot detect any fungoid disease on the leaves of *Magnolia grandiflora* sent for examination, but we suspect that the diseased condition has been brought about by root disturbance. *Magnolias* as a whole, and the evergreen kinds in particular, are very impatient of root injury, and often suffer after transplanting if the work is not done very carefully and at the proper season. You could not have selected a worse time for planting your specimen, for in midwinter the ground is wet and cold, and a considerable space of time elapses before new rootlets can be formed. The most satisfactory results are obtained by transplanting *M. grandiflora* during the latter part of April or early part of May. Following this period early September is the most suitable. It is necessary to take great care with the roots, so that they are subjected to as little injury as possible; also keep the surface roots near the surface of the soil, and mix a little peat among the soil round about the roots to encourage the formation of new rootlets.

ROSE GARDEN.

PLANTING NEW BEDS OF ROSES (W. L.).—The varieties you have mentioned are all good; but instead of *Lady Battersea* we would suggest *Laurent Carle*, and instead of *Liberty* or *Richmond*, *General Macarthur* would better match *Mme. Ravary* and *Lyon* in growth.

PRUNING ROSES THE FIRST SEASON AFTER PLANTING (Regular Reader).—Taking the Hybrid Perpetuals first, the moderate growers you can prune back to within 3 inches or 4 inches of the base of the plants, which would leave about four eyes. The varieties coming under this heading would be Nos. 1, 4, 5, 8, 9, 10, 11, 14, 16, 18, 19, 21, 22, 24 and 26. The remainder would be considered strong, and should be pruned back to within 8 inches or 10 inches of their base. If you desire to grow any of them as pillar Roses, such as Nos. 6, 13, 17 and 25, leave their growths some eighteen inches in length or even more. Of the Hybrid Teas cut back the weak growers to 2 inches or 3 inches or two or three eyes. They would be Nos. 12, 16, 17, 32, 48, 49 and 52. Prune the strong growers to within 8 inches or 10 inches of their base. They would be Nos. 5, 6, 38, 50 and 54. All the others would come under the moderate group, and may be pruned back to within 3 inches or 4 inches of their base this their first year. There would be a difference in pruning the second year.

ABOUT ROSES (C. L. C.).—Such a book as you portray would be a great boon to the amateur; but many Roses vary so much in certain localities that the information given could not possibly be accepted by everyone. For instance, you allude to the variety *Corallina* as being a thing of beauty grown as a standard, and only fit for the rubbish-heap when grown on its own roots, by which we presume you mean as a bush. Now, we have seen this Rose grown as a low hedge, a perfect picture and a real pleasure to behold; but it was in the autumn. It is useless in the summer, and will not bear comparison then with other beauties of the Rose garden. You say you have had to worry out certain knowledge for yourself. After all, this is really the best aid to successful Rose culture, and we would advise you to carry it out more extensively. We think if you followed up the Rose articles in *THE GARDEN* you would obtain much useful help. For instance, it has frequently been stated that *Crimson Rambler* should be grown in the open and not against walls or fences; but as to advising that this Rose should be planted "in a draught" seems to us to be ludicrous, because it is an experience totally different to that of the majority of individuals. If you were to visit many of our large gardens, you would find this Rose revelling in the open, away from draughts, and you would see it clambering over tree stumps in wildest luxuriance. You imply want of success in growing *Maman Cochet*. Have you tried this Rose as a wall climber? We have seen it doing splendidly thus grown, and if in a soil not too rich, its blooms are much superior. We hope some day that such a book as you desire may be forthcoming; but, obviously, it would need to be frequently revised, as our collection of Roses is being so rapidly augmented, and well-known varieties are being annually superseded.

THE GREENHOUSE.

BOUGAINVILLEA AND APHIDES (M. T.).—*Bougainvillea glabra* is not particularly liable to be attacked by aphides, and you should have no difficulty in keeping it free from these pests. An occasional fumigating with the XI. All Vaporiser will keep these pests completely in check.

AZALEAS AND PRIMULAS (J. D. N.).—After this lapse of time your Azaleas will, no doubt, need repotting. In carrying this out, all the mossy soil should be removed from the surface and the old ball of earth loosened with a pointed stick. You will, however, find full instructions on potting Azaleas in "Gardening for Beginners" in the issue of *THE GARDEN* for February 17. The white root-like objects that have come up are, in all probability, fungi from a piece of decaying wood. When a plant is grafted, the graft is held in position by a stake, and this in time decays and snaps off at the base, leaving a portion of the decayed part in the ball of earth. We have had in our collection many instances of a small white fungus coming up in this way; but if removed it will not harm the plant. The fact that the leaves rot and the stems push out roots above the ground point at once to the fact that your plants of *Primula kewensis* are being kept in too cold and damp a structure. You say nothing whatever as to this. In order to have it at its best, *Primula kewensis* needs a structure kept at a minimum temperature of 45°, running up 10° to 15° during the day, with, at the same time, a light, buoyant atmosphere.

CULTURE OF A SOUTH AFRICAN PLANT (H. B.).—The name of the flower sent is *Ornithogalum thyrsoides*. It is quite an old plant, but was very little known in this country prior to the Boer War, at which time large quantities of bulbs were sent home. The bulbs which you have should be potted at once. Very large bulbs may be put singly into pots 5 inches in diameter; but generally three bulbs can be accommodated in a pot of that size. The pots should be clean and effectually drained, and the bulb potted at such a depth that there is half an inch of soil above the top portion of the bulb. A soil consisting of two-thirds good yellow loam and one-third of peat or leaf-mould, with a liberal sprinkling of silver sand, will suit this *Ornithogalum* well. After being potted, the bulbs should be placed in the greenhouse and given just enough water to keep the soil slightly moist till there are signs of growth recommencing. When this takes place, more water must be given. Yours will probably soon develop flower-spikes, and after these are past water

should be given as before till the leaves show signs of going to rest, when less moisture will be required. When quite dormant, they may be kept dry. If the roots are in good condition, these *Ornithogalums* will not need annual repotting, but they must be watered when they are ready to start into growth.

GERANIUMS FOR WINTER FLOWERING (F. E. E.).—The best way is to propagate cuttings now, grow them on sturdily in cold frames all the summer, pinching off all flower-stalks at once as they appear, and in September or early October remove them to a warm, airy house, when they will bloom all through the winter. Fifty degrees is quite high enough temperature for them.

PRIMULA OBCONICA (J. McD.).—We suspect your *Primulas* have been allowed to become too dry on one or two occasions. The spotting of the leaves is certainly due to some atmospheric or cultural trouble, not to any insect or fungus attack, though there is some evidence that a few red spiders have attacked the foliage here and there. Perhaps a little more holding compost would have been preferable.

DIOSMA LEAVES (St. J.).—The leaves of *Diosma* are badly attacked by scale, which is, in any case, difficult to eradicate, but more particularly so in a plant with such small leaves as this. The best thing you can do is to make a very strong solution of soft soap and water; then lay the plant on its side and give a good syringing with the mixture. After a couple of hours, syringe with clean, tepid water, and repeat the operation in a couple of days till the pests are killed.

HYDRANGEAS TO POT (H. I.).—We hope the hard frost has not hurt your plants. Repot as soon as possible and place in a cool house in a shady position until new growth begins. Then put them in a sunny position in the house, give air freely, and as soon as the flower-buds are plumping give weak manure-water occasionally. We are glad to hear that you have found *THE GARDEN* so helpful in the past, and trust you will find it even more so in the future.

GREENHOUSE PLANTS (F. M. G.).—Judging by the leaves sent, the greenhouse has been kept much too close and damp, the leaves produced under these conditions being so soft in texture that they commence to decay, and thus furnish a direct foothold for the fungus to establish itself. There is certainly plenty of fungus present, but it is, we think, the effect rather than the cause of the trouble. With the lengthening days we shall get more sunshine, and it will be possible to give an increased amount of air to the greenhouse. This will lead to firmer growth, and then we do not think you will be further troubled in the way you have been. Any diseased leaves should be picked off and burnt.

STOPPING CHRYSANTHEMUMS (C. D., Suffolk).—The following varieties must be allowed to make natural breaks, and these will take place during May and the early part of June. The first-crown buds which show in August must be "taken." Mrs. A. T. Miller, J. E. Dunne, Reginald Vallis, Godfrey's King, Miss E. Thirkell, A. J. Norris, Valerie Greenham, Mme. E. Roger, F. S. Vallis, C. Beckett, Lady M. Conyers, Dorothy Oliver, W. Duckham and F. R. Stephens. The other varieties treat as follows: Master David, stop April 20; Hon. Mrs. Lopes, April 10; Mme. R. Oberthur, May 10; Sir Frank Crisp, March 5, and again May 15; O. H. Broomhead, March 15, and again May 20; Lady Talbot, May 10; Rose Pockett, May 15; and Pockett's Crimson, May 1.

AMARYLLIS BULBS AFFECTED (J. H.).—The grubs sent from the bulbs of *Amaryllis* are those of the *Narcissus* fly (*Merodon equestris*). This pest appears lately to have acquired the habit of feeding on bulbs other than those of the *Narcissus*. The fly is rather like a hairy bee, but has two wings. It flies with a peculiarly darting movement, and emits a very shrill sound when flying. It appears generally in May, but is about until July. Bulbs attacked should be burned. If the attack is discovered early, the grubs may be picked out of the bulbs; but this is rarely possible in time to save them. *Narcissus* bulbs, when an attack is feared, should not be planted until late September, when the bulbs containing maggots may usually be picked out by their softness. This pest is now notifiable to the Board of Agriculture, and the Secretary of the Board should be informed of the occurrence.

BEGONIA GLOIRE DE LORRAINE (Miss C. H.).—Cuttings of the flowering stems are quite useless in the case of *Begonia Gloire de Lorraine*; for, even if the points are struck, flowering stems they will always remain, and never form good bushy plants. In order to obtain cuttings, the plants should at this season be cut back to about six inches of the pot. Then they should be rested by being kept rather drier for two or three weeks, at the expiration of which time they must be placed in a temperature of 60° to 70°, and be occasionally bedewed over with the syringe during bright weather. In this way young, sturdy shoots will soon be pushed out, and when these are from one and a-half inches to two inches in length they form good cuttings, and soon root if put into sandy soil in a close propagating-case where there is a gentle bottom-heat. Throughout the summer the plants should have what is termed an intermediate temperature—that is to say, in very hot weather fire-heat may be dispensed with—but the structure must always be kept closer and moister than an ordinary greenhouse. In hot weather the plants are benefited by being syringed, but not in the winter. Old plants for the second year may be treated as for the production of cuttings, except that, when the new shoots are about half an inch in length, the plants may be shaken nearly clear of the old soil and be repotted in some fresh compost. After that a growing temperature of 60° to 70° will suit them well.



Some good Gaillardias—

1. Kenilworth.
2. Kelway's King.
3. Sunbeam.
4. Copper King.
5. Glory

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Mending Pergolas and Arches.—There is no time better than the present for mending pergolas, arches and similar structures. These have been exposed, it may be, for several years to the weather; and as the past few months have been exceptionally wet, the conditions created favoured the decay of the wood and the growth of fungus thereon. Furthermore, such plants as Roses are now free from leaves, and it is much easier to manipulate the branches when in that state than later when in full foliage.

Pruning House Climbers.—Where deciduous climbers are grown on dwelling-house walls, a close examination of them should be made now. The branches of nearly every kind look quite thinly disposed while in a leafless condition, but there is always the danger of them becoming overcrowded later on when in full growth. Few of such climbers can be then dealt with without causing unsightly gaps. Thin out the weakly shoots, some that cross others, and cut off the unripe ends of those retained. Tie or nail up any branches that require it, and deal similarly with the evergreen kinds.

An Early-Flowering Almond.—Prunus Amygdalus persicoides, a variety of the common Almond, is conspicuous by reason of its flowers opening a fortnight or so in advance of those of the type. Normally, they may be expected to open about the middle of March in the neighbourhood of London, but this year they were well advanced by the middle of February. There is little by which it may be distinguished from other forms of P. Amygdalus save by its early flowering, for in leaves and flowers they are much the same. By the inclusion of a tree or two among other Almonds the flowering period of the group may be extended, and any tree which blooms before the end of March is to be encouraged.

Buddleia Colvillei in Scotland.—As many people experience a difficulty in flowering the fine Buddleia Colvillei in Scotland, it may be mentioned that it has flowered for several years in the garden of Mr. W. D. Robinson-Douglas at Orchardton, Castle Douglas. It is grown there on a wall, and was several years in position before it bloomed. Its flowering appears to depend largely on the manner in which the young growths stand the winter, as it is on these that the flowers are borne. In the case of B. variabilis, the flowers come on the shoots of the same year, so that its being cut back does not matter. B. Colvillei has really handsome flowers, in long panicles of 1 foot or 18 inches in length, and of a delightful rose colour, with a white ring round the mouth of the corolla. The specimen at Orchardton is 10 feet or 12 feet high.

A Useful Greenhouse Begonia.—A charming effect is produced in the greenhouse at Kew at the present time by a large group of the Mexican Begonia manicata, and we cannot but wish that the plant found more general favour among people who are responsible for keeping greenhouses and conservatories gay at this time of the year. Belonging to the rhizomatous section of the genus, B. manicata is recognised by its large, handsome green foliage and upright, elegant panicles of pink flowers. On vigorous examples the inflorescences sometimes approach a height of 2½ feet, while those 1½ feet high are common. Arranged with foliage plants, or with Hippeastrums as at Kew, the effect is very pleasing.

Narcissus Seedlings.—What was probably one of the most interesting exhibits at the last meeting of the Royal Horticultural Society, to hardy flower-lovers at least, was the remarkable series of seedling Daffodils, the result of crossing the small-growing N. minimus and N. cyclamineus, the seedlings presenting to some extent characters intermediate between both parents. As shown, none of the plants had flowers quite so large as N. cyclamineus, and for the most part they shared the colour of the other parent, leaning also in the same direction for the greater width of the mouth of the trumpet. None of the seedlings, however, had the drooping flowers of N. cyclamineus or its erectly-poised reflexing segments, the whole of them having the more horizontally-disposed direction which characterises N. minimus. It is possible, however, that the plants may yet develop their characters more fully.

The Two-leaved Scilla.—A number of pretty effects have recently been noted by the combination of the pretty Scilla bifolia with Snowdrops and coloured-stemmed shrubs. It is particularly attractive when used as a carpet beneath white-stemmed Brambles, while with Snowdrops it comes in very nicely for clothing bare ground beneath a thin shrubbery. Such plants as these are peculiarly adapted for planting beneath shrubs, for they blossom early and finish their growth in time for the borders and beds to be cleaned up for May, when the majority of the shrubs are expected to be in bloom. Later-flowering bulbs, on the other hand, keep the ground untidy until midsummer, for it is not possible to clean it properly until the foliage has died down. Vigorous-growing bulbs, such as Narcissi, are also less well adapted for shrubbery work than these neater and dwarfer-growing sorts; therefore now that many of them are coming into flower, note should be made of those which are most likely to create a good display for another year. Unlike the Crocuses, the two-leaved Scilla and the Snowdrops do not succeed for many years when planted in grass; therefore there is all the more reason for their use in beds and shrubberies.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Lapageria in the Open.—"S. A.," in THE GARDEN, issue February 17, page 78, advocates the planting of *Lapageria rosea* and *L. rosea alba* in the open where duly sheltered quarters are available. Some years ago, while on a visit to a large garden on the South Coast of Hampshire, the gardener pointed out a number of plants which had their branches trained to the south-west walls of the mansion. He had put them there three years previously in suitable soil, peat, loam and sand, and he told me that they were just getting established and forming flower-buds. They had withstood exposure to two ordinary winters without injury.—AVON.

What to Plant Beneath Trees.—I can very fully bear out all that is advanced on page 77 of the issue for February 17 in favour of the St. John's Wort as a suitable plant for growing under trees. I have found it do remarkably well in such positions in rather heavy soils, and also on a rather steep bank facing south within 200 yards of the sea. The soil in this instance was light and sandy and very poor, but the plants grew freely and flowered exceptionally well. Another good plant for growing under trees is the Periwinkle (*Vinca*). Its green, glossy leaves and blue and white flowers, respectively, are charming. It makes a fine carpet under Pines, where very few kinds of plants will grow.—B.

Varieties of Iris reticulata.—Some four or five years ago we had a spell of particularly warm sunny weather in late February and early March, and I noticed the bees very busy on my Irises, *reticulata*, *Krelagei*, *Danfordiae* and several other allied varieties. I gathered a good quantity of seed that year, and the resulting plants, now mostly flowering for the first time, are making a most charming display in a large cold frame. They range through every shade of blue and purple, and there is one nearly white. Several of them are very fine, large, tall-growing plants, and many exhibit delightful contrasts of colour in the standards and falls. On going carefully through them to-day, I can scarcely find two alike, so great is the variety.—F. HERBERT CHAPMAN, Rye.

Horticultural Education for Women.—Demands in relation to horticultural education in all its numerous phases grow rapidly, and it is difficult for public or private authorities to keep pace with them. A gentleman in Surrey just recently enquired for a horticultural school, training institution, or practice garden to which he could send a young girl now in a secondary school in the county, and who earnestly desired to obtain good gardening instruction. Was there in Surrey no counterpart for girls to the school of gardening for young men at Wisley under the auspices of the Royal Horticultural Society? No, there was not, the Royal Horticultural Society not including females among its garden students. Why not send the girl to Swanley College? That was too expensive, was the reply. What is needed is a good advanced practice garden, organised in a central position by the County Education Authority, to which both lads and girls could be sent for a couple of years' training. If at the end of that time they did not manifest sufficient capacity, they would become failures. Practical gardening, even when conducted by females, is onerous, arduous and largely

menial. Still, it has all to be gone through and faced with spirit. It is later in life, if good use has been made of youth, that the reward is found.—A. D.

Cotoneaster horizontalis.—On page 78, issue February 17, "H. P." does not praise this lovely plant too much. If grown in a rockery with its branches flattened out against large boulders, the effect in autumn, when the leaves change colour, is very striking. I have lately seen plants trained against turf banks, and they looked very well indeed. A gravelly and peaty soil is suitable. If clayey, some peat and road scrapings, or similar material, must be added to lighten it.—SHAMROCK.

Hippeastrum (Amaryllis) procerum.—This *Hippeastrum*, so truthfully portrayed on page 93, issue February 24, is particularly interesting in the colour of its blossoms, while the large club-like bulb is very different from that of the other members of the genus. It does not appear to be at all amenable to cultivation, for though I have flowered it several times, it was only as freshly-imported plants, and the Kew specimen I see is the same. In my case it was necessary to grow the bulbs in pots, and it now remains to be seen whether, if planted out as at Kew, they will become permanently established. Widely distinct as it is in general appearance from the garden varieties of *Hippeastrum*, this species would appear to have other points of difference, for any attempts to cross it with other forms have, so far as I know, proved unsuccessful.—H. P.

Lilacs on their Own Roots.—As stated on page 92, February 24, it is not advisable to graft the garden varieties on to the common Lilac, as the suckers are almost certain to spring up afterwards. On this point I was particularly interested to learn, during a recent visit to a large Nursery that all the Lilacs there (and they have a fine collection of the very best) are on their own roots, having been raised from layers. What is more, the beds of layers, as can well be understood, covered a considerable space. The great advantage of plants of Lilac on their own roots is that there is no need to trouble about suckers, in the case of grafted plants, are a most unmitigated nuisance. When Lilacs are flowered under glass, the shoots then produced are not at all difficult to strike if they are placed in a close propagating-case and given much the same treatment as Fuchsias.—H. P.

A Garden Water-Course.—In THE GARDEN of February 17 Miss Jekyll names some useful and attractive plants that would add to the view of a water-course, pond or lake. No doubt there are many neglected gentle streams in gardens which might be made quite beautiful. The banks of a stream, especially those with a gentle slope to the water, are perhaps the most suitable places to be made attractive. There are a number of shrubby plants that seem to thrive in such partly-sheltered grounds, such as the *Viburnums*, *Laburnums*, *Lilacs*, *Rhododendrons*, *Azaleas*, the *Brooms* (white and yellow flowered), the *Snowberry* (a pleasing shrub covered with white berries in winter), the *Pernettyas* (covered with pink berries in winter), *Laurustinus*, the *Barberries* (especially *Berberis stenophylla* and *B. Darwinii*), the wild and other single *Roses* and the *Honeysuckle*, with a few *Almond* trees for their early spring flowers. *Primroses*, *Hyacinths*, *Snowdrops* or other bulbs might be allowed to grow naturally under the shrubs. In the stream itself one or more pools may be

formed by banking up the stream with earth secured by rubble stone, which would also form a kind of waterfall. Such pools would allow the safe planting of many flowering water plants, such as the purple *Willow-herbs*, *Plantains*, *Ranunculus*, *Sagittaria*, *Villarsia*, *Lilies*, *Spiræas* and, in particular, that beautiful white fragrant plant, *Aponogeton distachyon*, better known as the *Water Hawthorn*. Though the latter plant is a native of South Africa, it flowers freely in British waters, but a little protection during winter is essential to its safety.—J. NEWTON, *Ashton-under-Lyne*.

A Collection of Snowdrops.—Miss Alice G. Bickham of Gorsefield, Bowdon, Cheshire, has a very extensive collection of *Snowdrops*, as a friend who knows her flowers informs me. Miss Bickham is an enthusiastic cultivator of the "harbinger of the infant year," and there are few known species and varieties which are not in her garden. Many of Mr. James Allen's raising and selection are at Gorsefield, and the species which have been imported, as well as the out-of-the-way varieties of our common *Snowdrop*, are there also. For example, Miss Bickham has, I am told, the rare double yellow one, while she has also some single yellow forms. I suppose "yellow marked" would be a truer definition of the flowers than "yellow," but they are very pretty. The quaint-looking *Galanthus Scharlokii* is also at Gorsefield, and the whole collection seems to be a splendid one.—A. M. D.

Why do Snowdrops Fail in Some Soils?—This is the question with which Mr. Arnott commences his interesting note in THE GARDEN of February 17, and in response to his suggestion that those who have studied the likes and dislikes of this charming but capricious little plant should give the result of their observations through the medium of THE GARDEN, I am sending this short note in the hope that it may perhaps save some failures and disappointments. First of all, we may take it as certain that *Snowdrops* do not like being moved, and that they suffer considerably from being lifted and dried. I have moved bulbs at different times of the year—in the early summer, when the foliage has died down, drying and replanting them in the ordinary way; I have lifted and replanted them in the autumn; and I have moved them in the spring, when in flower, with as little disturbance to the roots as possible, and those moved in the spring seemed to suffer least, no doubt because they were not subjected to the drying process. But those who have no *Snowdrops* in their gardens and want to have some must get bulbs lifted and dried in the ordinary way, and my advice to them is to procure the bulbs as early in the season as they can and plant them as soon as they arrive in some sheltered position where the soil is open, cool and well drained. If you have some woodland bank, sloping towards the north for preference, where the soil is favourable, you have an ideal spot for planting *Snowdrops*. They revel in such a place. The *Snowdrop* is modest and retiring in its habits, and is seldom found naturalised in the open, whereas it invariably looks happiest among the tangle of roots and low undergrowth with its covering of rich leaf-soil. Therefore, to sum up, endeavour to give them conditions as near those described as possible, and, at any rate, avoid planting in stiff, badly-drained soil. Leave them severely alone, both root and flower, when they are established.—W. A. WATTS.

Varieties of Crocus chrysanthus.—Two pretty little varieties of Crocus chrysanthus are always among the earliest of the Crocuses to bloom. These are fusco-tinctus and fusco-lineatus. The former is of a good yellow, tinged or flushed with brown on the exterior of the outer segments, and the latter is also yellow, but the brown colouring takes the form of lines, also on the outer segments. These flowers are small in size, but are very pretty and bright, while the earliness of their flowering renders them welcome in any garden. These Crocuses are inexpensive, and are as easily cultivated as any. They are admirable little flowers for the rock garden.—S. A.

A Well-Grown Saxifraga longifolia.—The rosette of the Saxifraga longifolia shown in the accompanying illustration had, after eight years' growth on the rockery, reached 12½ inches in diameter, when, alas! it showed signs of developing its inflorescence last summer. When fully developed, the main flower-stem measured 26 inches in length. It was a grand sight indeed, although I should have preferred to keep for a few years longer the imposing rosette which had for so long been the pride of the rockery. It is, I believe, rare to have a rosette of such dimensions, most of them flowering at a much younger age.—E. HEINRICH, Planegg, near Munich, Bavaria.

Hop Manure.—There are few matters in relation to gardening that give more concern to the small amateur, of whom there are myriads, than getting a proper supply of fibre-giving manure. Such amateurs are told week after week to trench the ground deeply and to manure liberally. The trenching or digging they can get done; the purchase of plants or seeds gives little trouble if the pocket permits of it; but the liberal manuring baffles them, because the animal manures so strongly advised by writers, and too often just as though they fell like manna from the skies, are not obtainable at any price. Mineral or chemical manures they can purchase freely; but these at their best furnish no enduring fibre in the soil, and it is this material which gives such value to animal manures, especially to stable manures. Hence amateurs ask what is the best substitute for the animal matter, which is fast becoming so scarce, and they are told to use Hop Manure. That may be a good substitute for the absence of the strawy matter, especially if it were impregnated with strong manurial elements, as are animal manures. But is it so? What is the experience of amateurs who may have been users of it? One does not want trade eulogies, but the practical experience of those who, unable to obtain animal manures, have used Hop Manure. Presumably the material is identical with that we see carted away from breweries as spent Hops, out of which have been soaked and washed all those astringent properties which render Hops so useful in the manufacture of beer. If that is so, what is left other than mere fibre, which would, incorporated in the soil, slowly decompose? Does the Hop Manure sold by Wakeley's or by anyone else signify a compound of which the spent Hops form the body or basis, while the

plant or crop foods it may contain are added in the form of chemical or mineral elements?—A. D.

Carnation Britannia Under Glass.—In your review of my new book "Perpetual Carnations," which appeared on page xvi. of your issue for February 17, I notice you call attention to the fact that in one chapter I describe Britannia as one of the best varieties for bedding purposes, yet later on declare it to be wiser for winter flowering to grow this variety entirely under glass. I beg to point out that, however inconsistent this may at first appear, what I have said is precisely the case. For bedding-out in summer I doubt if Britannia can be excelled; nevertheless, for winter blooming I have found it best to grow this variety entirely under glass in summer, as otherwise, after an abnormally wet summer or a normally damp autumn, Britannia is liable to develop the dreaded spot disease. I think you have done a real service to those not acquainted with these facts by question-

CHRYSANTHEMUMS.

SEASONABLE NOTES.

THE Chrysanthemum is a cool temperature plant and is not improved by undue artificial heat, but rather injured. Those readers possessing cool frames should now make some use of them, for these plants succeed better in them than in a heated structure after this date.

Potting Plants for Various Purposes.—All plants are not grown for the same purpose. Some, of course, are grown for exhibition only; others are required for the decoration of the greenhouse or conservatory, or for the supply of cut flowers. When first potted the end in view should be borne in mind, so that the work of repotting may be carried on as it should be. It is necessary to determine now how many plants shall be grown in



SAXIFRAGA LONGIFOLIA IN A BAVARIAN ROCK GARDEN.

ing and calling attention to what at first certainly might be taken for an inconsistency.—LAURENCE J. COOK.

FORTHCOMING EVENTS.

March 5.—Royal Horticultural Society's Meeting and Forced Bulb Show (two days). Lecture at 3 p.m. on "The Stimulation of Plant Growth," by Professor H. E. Armstrong, F.R.S., M.D.

March 5.—Scottish Horticultural Association's Meeting.

March 7.—Linnean Society's Meeting; Manchester and North of England Orchid Society's Meeting.

March 9.—Chester Paxton Society's Meeting. Lecture at 8 p.m. on "The Natural History of Nyasaland," by Professor Robert Newstead, M.Sc., A.L.S.

the flowering pots; then suitable sizes may be used in the meantime. If plants are to be grown for specimen blooms on single-stemmed plants in 10-inch pots, the first potting should be in 3-inch pots and the second in 4½-inch pots. For specimen plants bearing, say, from nine to two dozen blooms or more, the second potting must be in 6-inch pots, and so on to 12-inch flowering pots. Some plants are flowered on one stem in 8-inch pots, and others from spring-rooted cuttings in 7-inch pots. In each case the first potting must be in 3-inch pots and the second in 4½-inch pots and 6-inch pots respectively. Those plants in the 6-inch pots should be finally transferred to the 8-inch pots.

The Best Soil.—For the first potting use fibrous loam two parts, leaf-soil one part, rotted manure and coarse sand one part. To a bushel of the above add a 3½-inch potful of wood-ashes and 4oz. of

bone-meal. For the second potting use loam and leaf-soil as before, but in a more lumpy condition, a similar quantity of rotted manure, but 6oz. of bone-meal, some approved concentrated fertiliser according to the directions, a 6-inch potful of wood-ashes, and a 4-inch potful of soot with the coarse sand. One crock, well placed in the pot, with some lumps of turf on it, will provide sufficient drainage. Too many crocks are used as a rule, and they take up space that should be occupied by compost. Keep the newly-potted plants close together in a frame with the lights closed for several days, and do not water for three days. An early morning spray from the syringe will be very beneficial. Admit air freely afterwards.

Stopping.—Plants that are to be treated for the production of second-crown buds generally, and others to form specimen plants, must be stopped about the middle of the month. Very late-flowering varieties that are to bear first-crowns, such as Mme. Rivo!, must be stopped at the end of March.

Propagation of Border Varieties.—The cuttings may be inserted 3 inches apart in boxes 6 inches deep in 2½ inches of compost, and covered with loose squares of glass. Give a good watering, place the boxes on a warm stage or bed of any house with a summer temperature, and there will soon be nicely-rooted young plants for potting-off. AVON.

WORKERS AMONG THE FLOWERS.

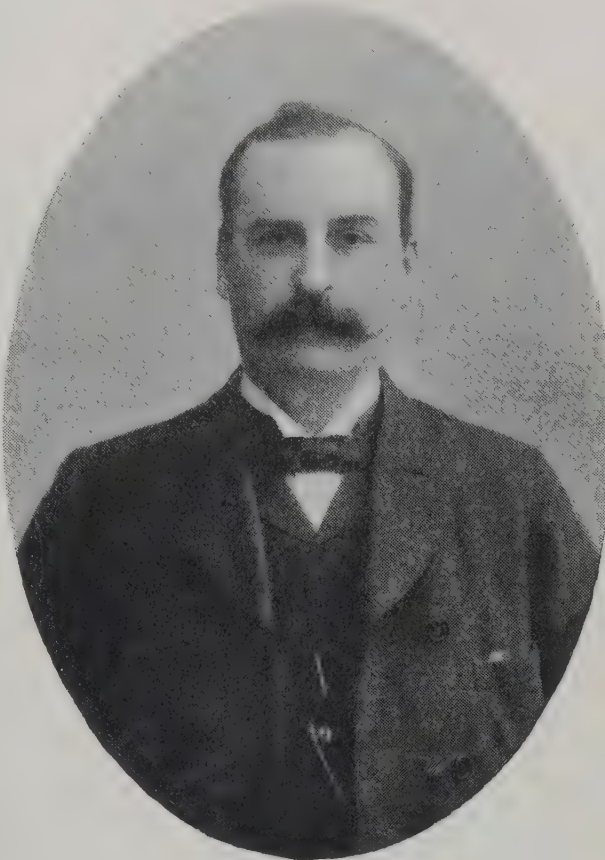
THE REV. J. JACOB.

THE name of Mr. Jacob will be a familiar one to most of our readers, and in response to numerous requests we now have much pleasure in publishing his portrait. From his earliest days Mr. Jacob has been devoted to the study of flowers, and when at school at Uppingham took a keen delight in collecting wild flowers, winning several prizes for his collections. Later on at Cambridge he took his degree in Botany (Natural Science Tripos), so that when he commenced the cultivation of flowers he had received a good grounding in their structure.

As will be gathered from his articles which we have published from time to time, Mr. Jacob is particularly interested in Daffodils and Tulips, and in his rectory garden at Whitewell, near Whitchurch, Shropshire, he grows extensively both these flowers. Owing to his being in great request as a judge at Daffodil shows, he has not been able to devote enough time to hybridising, and the introductions with which his name is coupled, viz., Whitewell, Orient and Mrs. W. O. Wolseley, are not his own raising. Other plants which are grown on a large scale at Whitewell are Columbines, Sweet Peas, Lachenalias, Nerines, Carnations and Polyanthus. Mr. Jacob's strains of the first and last of these are particularly good.

During recent years he has made a hobby of collecting old gardening books, and his library now contains some very rare specimens, notably, Hortus Floridus of Passæus, Haworth's Monograph on the Narcissus, Le Floriste François, Twelve Months of Flowers and Twelve Months of Fruits, and Vallet's Le jardin du Roi très Chrestien Louis XIII. As indicative of the active interest that he takes in horticulture, we may mention

that Mr. Jacob is a member of the Royal Horticultural Society's Narcissus committee, a vice-president and member of the committee of the Perpetual Flowering Carnation Society, chairman of the Midland Daffodil Society's committee, member of the National Sweet Pea Society's committee, president of the Whitchurch Sweet Pea Society, chairman of the horticultural section of the Whitchurch Agricultural and Horticultural Society and secretary for the Shropshire committee of the International Horticultural Exhibition. It is to the efforts of such amateurs as Mr. Jacob, who labour for the love of the flowers they are interested in, that our gardens of to-day owe much of their beauty, and we feel sure that our readers will join with us in the earnest desire



THE REV. JOSEPH JACOB.

that he may be spared many years to continue the good work that he has set his hand to.

TREES AND SHRUBS.

THE DAPHNES AND THEIR CULTIVATION.

I KNOW of no genus of plants more interesting, sweeter, or more beautiful than the Daphnes. They are not all easy to cultivate, it is true, and this is all the more reason for doing one's best to cultivate them. Their very ornamental flowers, their erect, tufted growth, but, above all, their delicious perfume, place them in the very first rank of rock plants. I have been collecting and cultivating them for more than forty years without having succeeded with all the varieties which have been described or knowing exactly the treatment suitable for two or three of the more delicate varieties, notably Genkwa (see illustration on page 105) and yezoense. With regard to the saxatile and alpine varieties, however, I think I may say that we cultivate them all successfully at Floraire.

Unfortunately, the different species or varieties of Daphne are known in gardens under all sorts of names, and it is absolutely impossible for an

amateur who is not conversant with their nomenclature and synonymy to recognise them. I have found in the gardens of England and Germany *D. collina* grown under six different names, and *D. Cneorum* under three or four! The following is a short review of the Daphnes which are actually in cultivation:

D. alpina.—A little shrub from 1 foot to 3 feet high, with very divided branches, white, slightly-scented flowers and frail leaves. It grows in the calcareous rocks of the Alps, the Apennines and the Pyrenees in full sunshine.

D. altaica, the Asiatic variety, differs from it by its erect growth, frail leaves and white flowers.

D. arbuscula.—There are two plants under this name. One is a form of *D. Laureola*, described by Dr. Chriet of Bâle; the other a horticultural form of *Cneorum* which I formerly received from Vienna.

D. atropurpurea is a *Mezereum* with purple black leaves. It is only a gardener's variety.

D. blagayana is well known in England, where I have seen the largest specimens in existence. It is an Austrian plant, which has only been known for three-quarters of a century and cannot be grown everywhere. In our alpine gardens, especially at Linnæa (at an altitude of 4,500 feet), it becomes very beautiful, but does not attain the extraordinary proportions which I saw at Edinburgh and Glasnevin.

D. buxifolia is a miniature form of *D. alpina*, with obtuse leaves, silky grey underneath.

D. caucasica, also known under the name of *D. salicifolia*, is related to *D. altaica*, from which it is distinguished by its taller stature (I have known plants to be from 4 feet to 5 feet high), by its longer glaucous leaves and by its larger greenish white flowers. I received from the Botanic Gardens of Moscow twelve years ago a plant of

D. Sophiae, the leaves of which are streaked with white and green, the flowers white and scented, and which is about midway between *D. altaica* and *D. caucasica*.

D. Gnidium, of the Mediterranean regions, has green flowers which are hardly noticeable, but, thanks to its very ornamental foliage, which recalls that of *Veronica Traversii*, it is a decorative shrub for shady and dark places.

D. hybrida (*D. Dauphinii*, *D. Delphinii* or *D. indica*) is a beautiful Asiatic shrub, with large, glossy, evergreen leaves and little clusters of very fragrant reddish violet flowers, which is not quite at home with us, as well as in the centre and North of England.

D. Laureola, as well as its variety *Philippii* of the Pyrenees, is a shrub characteristic of deep and shady woods. It has fine, glossy, evergreen foliage and green flowers which are followed by black berries.

D. pontica, of which I have seen an enormous specimen at Munstead Wood, is closely related to it, and is distinguished from it by its elliptically-oval leaves and its flowers suspended from the end of long pedicels.

D. Mezereum and its various forms are too well known for me to enlarge upon them. The *D. odora* of Japan, with its variety *marginata* and the *D. japonica*, are among the sweetest of the known flowers. In the North of Italy, the South and West of France, and also here and there in England, but very rarely, however, one sees in the half-shady places of gardens these delicate and scented shrubs, and the perfume of their flowers is diffused all

around. The first-named has lilac rose flowers, the variety *marginata* has leaves edged with white and yellow, and *japonica*, which is more erect, has flowers of a very pure white and more elliptical leaves.

D. oleoides of Greece is related to *buxifolia*. It can stand our winters well, but last year it suffered with me from the ardent sun of the early spring.

D. Pseudo-Mezereum, seeds of which were sent me ten years ago from the Botanic Gardens of Tokyo, has never flourished with me; but a Chinese or Japanese *Daphne* which was given to me by M. Maurice Vilmorin under a number closely resembles it in growth, and has given me very fragrant, bright orange flowers. It has not been described. Let us now turn to the most alpine, the most rock-loving and the oldest of the *Daphnes*,

D. rupestris or *petræa*.—This grows spontaneously in the rocks of Trentin, on the north side of Lake Garda and Icdro, and spreads over the face of the rocks its clusters of beautiful clear carmine flowers. The bushes are dwarf and close-growing, the branches compact, and the evergreen leaves dark glossy green. We cultivate it at *Floraire* in full sunshine, and raise it from seeds, cuttings and grafts. We once found a white-flowered variety, but we did not manage to preserve it. I have just received from Petersburg a new *Daphne* named *D. kamschatica* which I have no knowledge of yet, but it may, of course, prove to be something interesting.

The propagation of *Daphnes* is a slow but not difficult process. It is effected by means of seeds (which take at least a year to germinate), cuttings, layers and grafts. All the *Daphnes* will root from cuttings, in spite of what is generally thought.

We have raised by the hundreds the most difficult of all, *D. indica*, and even *japonica* and *odorata*, for the clients of our establishment at *Floraire* usually prefer them to the grafted plants. They take sometimes two years to form roots! *D. rupestris* is the easiest to raise from cuttings, but its growth is the slowest of all. The work is very fascinating, and well repays the trouble entailed, although this, at times, is very considerable.

Floraire, Geneva.

HENRY CORREVON.

THE VIRGINIAN WITCH HAZEL.

As a flowering tree the *Virginian Witch Hazel* (*Hamamelis virginica*) is of small account, the flowers being but little in evidence. Then at other seasons than autumn it is not especially attractive. On the other hand, when it colours well in autumn, as it usually does, the amber hue of the leaves gives a really good effect, and we see that it has some value for the purpose of adding this hue to the garden, although, of course, there are other shrubs which will also afford it. Still, the *Virginian Witch Hazel* may be kept in view, though it is less attractive in other respects than its allies.

S. A.

THE ROCK AND WATER GARDEN.

DWARF FORMS OF SAXIFRAGA AIZOON.

THE dwarf forms of *Saxifraga Aizoon* are among the most fascinating of this group, forming dense, tightly-packed clumps of tiny grey rosettes that enjoy the fullest sunshine in the crevices of the hot rocks, the intense heat of which would be sufficient to wilt the leaves of the larger silvers. The form known as *Portæ* is intermediate between the type and the miniatures, and is a pretty little plant, though not possessing the attractiveness of the true dwarfs. *Minima* is one of the most charming of the diminutive section, appearing almost like a close-growing grey moss that clings tightly to the rock faces. A variety introduced as *labradorica* is another delightful

so small a plant. There are many handsome hybrids of *S. Aizoon*, *S. Malyi* being one of these, as in all probability are *Churchillii* (with firm rosettes of pointed leaves), *elatior*, *Gaudinii* and *rhætica*.

These handsome hybrids well merit introduction into the rock garden, for their cultivation is very simple and they are distinctly attractive, two properties which are, unfortunately, rarely possessed at the same time by alpine plants. *S. Engleri* is not to be excelled in beauty as regards its foliage, the great rosettes of narrow, blue and silver grey leaves being most lovely. *S. Hostii* is a very rapid grower, with dark greenish grey leaves that lack the silvery brightness of many others of the encrusted section, and *S. altissima* is apparently only a strong variety of *Hostii*.

WYNDHAM FITZHERBERT.

ANDROSACE LAGGERI.

ANDROSACES are always coveted by those who are devoted to the cultivation of alpine plants, and



DAPHNE GENKWA, A LITTLE-KNOWN SPECIES WITH LILAC-BLUE FLOWERS.

little plant, quite as dwarf as *minima* and equally captivating. There are many other dwarfs which have been sent out under manifestly incorrect names, some of which titles belong, by right, to the mossy race of *Saxifrages*.

However, under whatever appellations they masquerade, all of the dwarfs are well worth growing, since they are of the easiest culture and will add to the delights of the rock garden, being among the most desirable and enduring of all their great and lovely family. One, labelled with the impossible name of *La Ga Dauphane*, is an extremely pretty miniature plant. Its habit, with its tiny silvery rosettes, is very pleasing, and its constitution leaves nothing to be desired. The ruddy flower-stems are 6 inches in height, and the four to six blossoms on each stem are creamy white, thick and wax-like, and large for

there are few which better reward their notice than the charming species known as *A. Lageri*. It is not one of the most difficult, by any means; it is beautiful enough to satisfy the most fastidious; and it is a true perennial which braves the uncertainties of our climate as well as any other *Androsace*, and far better than many of them. Thus, it does not appear to call even for the glass protection in winter which is so advantageous to many, and its needs are few, save in the shape of annual top-dressings of fine soil well worked among its rosettes.

If it is planted on a level spot, or one which is nearly so, given a light, gritty soil, partial shade and abundance of water at the roots in summer, it is almost certain to thrive. *A. Lageri* is of the same type as *A. carnea*, but has the pretty, deep green, spiny leaves more

distinctly arranged in little rosettes. The flowers are at first sessile, but afterwards rise slightly above the plant itself, and look very dainty with their rose or deep pink little petals, each lighter towards the base. It is one of the choicest of all alpine flowers. S. ARNOTT.

THE WHITE-FLOWERED GRAPE HYACINTH.

Few of our early spring bulbous plants are more welcome in the rock garden than the *Muscari* in its several varieties. Coming into flower, as they usually do, at the end of February or early in March, groups of these charming white or blue Grape Hyacinths are very cheering. A strong point in their favour is the fact that they seem to thrive in quite ordinary soil, and sow themselves so readily that they spread into irregular patches in a quite delightful way.

THE GREENHOUSE.

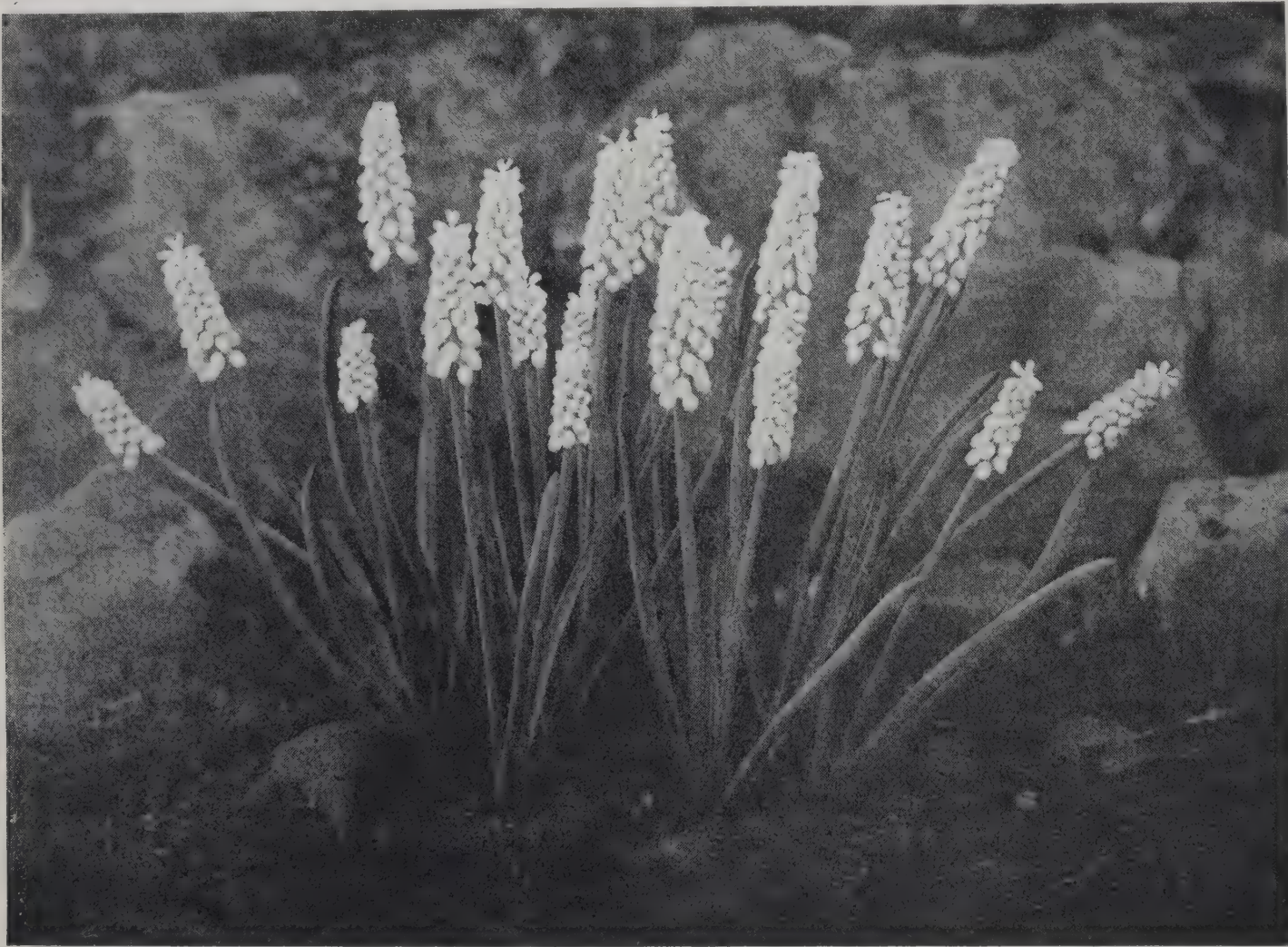
HOW TO GROW FREESIAS.

THE cultivation of *Freessias* is shunned by a number of people after one or two attempts, as, unless one "knows the ropes," it is difficult to get them to flower satisfactorily. Experience is the best teacher, and after a number of years of steady perseverance I really think that this season, for the first time, I may say that I have mastered all the secrets and made the plants behave well enough to thoroughly please and satisfy me. I am convinced now that the greatest mistake and the most fertile source of failure is the coddling of the plants. The amateur is always in a hurry for the flowers, and imagines that to get plants into bloom he has only to keep

pots are stood outside where they may get the benefit of all the rainfall that is going, and housed before the frosts commence, weeding, of course, being well attended to throughout. The potting compost favoured here is good loam, well-decayed manure and leaf-mould, made porous with the addition of a fair proportion of sand.

As to varieties, the old *refracta*, *refracta alba* and *Leichtlinii* will always be favourites for their pure colouring and charming, delicate fragrance; but, thanks to hybridists, there is now such a wide range of colour that the lover of *Freessias* should by no means restrict himself to the above three. *F. Chapmanii*, given an award of merit by the Royal Horticultural Society a few years back, is of a rich golden yellow colour, and should be included in all collections. Then, in addition, there are the charming new varieties raised by Mr. Van Tubergen of Haarlem, several of which

I am trying this year for the first time, and they surprise and delight the grower not only by their novel range of colour, but by their vigour and free-flowering qualities. Side by side in my greenhouse with the old species, the latter are not in the running with Van Tubergen's for vigour of growth and floriferousness, the Dutch plants carrying more flowers to the spike, on longer stems, and the whole pot making an altogether more effective display. Of those that I am growing, a variety named *Salmonetta* charms me the most. The colour is a rich tone of chestnut red, shading to old gold at the throat, a fascinating combination showing well under artificial light. Abundance is the freest-flowering of the lot, producing literally in abundance its lilac rose flowers, which deepen in colour with age. Giant should be a useful variety to the raiser of seedlings, being a plant of great size and vigour, its long stalks bearing large flowers of delicate lavender. *Le Phare* at first sight did not appear to differ greatly from Abundance, but now that the plants are in full flower I can see that the more yellow throat and rather deeper hue of the flower make it more brilliant and effective. *Multicolore* is a strong-growing variety, pale rose, with a tinge of yellow, but has perhaps a little too much white in it to make it really effective. Contrast, described



THE WHITE-FLOWERED GRAPE HYACINTH (*MUSCARIA BOTRYOIDES ALBUM*) IN THE ROCK GARDEN.

What preference they have seems to be for a moist, cool soil, such as the drier part of the bog-bed, while they look well coming through a carpet of *Saxifraga oppositifolia* or *Arenaria balearica*, and seem very happy in such positions.

They appear to me to look best in small colonies, rather than the vast plantations which one sometimes sees in large gardens, when the daintiness of the individual blossoms is to a large extent lost. Here at Woodford I find it advisable to stretch a few pieces of black cotton over the plants, or the sparrows investigate the buds long before they are expanded—with the usual result. Varieties which do very well with me are *M. botryoides* and its white form *album*, which is shown in the accompanying illustration, and *M. azureum*, sometimes, and I believe correctly, called *Hyacinthus azureus*, and these will, I feel sure, give great delight to all who grow them.

Woodford, Essex.

REGINALD A. MALBY.

them in a high temperature; and if they do not come along to his satisfaction, he raises the temperature.

The main essentials in the cultivation of *Freessias* are (1) early planting (I pot mine in July if possible); (2) plenty of air at all times when possible; (3) frequent watering with plain or soot water, or weak liquid manure. As to the first point, I have found it useless to attempt to get good flowers from bulbs planted as late as November and December; August is a good month, and July even better. Point 2 I have already written about. *Freessias* are never so unhappy as when in a close and badly-ventilated house. With regard to Point 3, I give my plants alternate doses of plain and soot water during early growth, and, when the buds show, an occasional application of weak liquid cow-manure. It is advisable throughout to keep them rather on the wet than on the dry side, so long as ventilation and good drainage are assured. When the bulbs are first potted, the

as white, with a very telling orange blotch on the lower petals, I am not growing; but if it at all resembles *Fairy Queen*, it is a fine showy flower, and this latter is undoubtedly a very telling and striking variety if well grown.

Mr. Van Tubergen writes me that the finest pure rose seedling he has yet raised is *Conquest*, which is about the colour of *Rhododendron præcox*. This is not yet, I believe, in commerce, but he hopes to show it in London this spring. I conclude my list with a mention of *Rose Queen*, of which Messrs. Barr have the stock. This obtained an award of merit from the Royal Horticultural Society in 1909, and is of handsome rich carmine rose colour, a revelation to those who only knew the old white or whitish varieties, and to many who little dreamed that our plant-houses would become enriched with the welcome variety of colour which we can now enjoy.

Rye, Sussex.

F. HERBERT CHAPMAN.

A GREENHOUSE SUGGESTION FOR SPRING.

THERE are possibly readers who are rather tired of the usual *omnium gatherum* of all sorts and conditions of plants in their glass-houses in the early months of the year, and who would be glad of suggestions as to how the everlasting sameness can be avoided. Putting my suggestions into a nutshell, they resolve themselves into the advice, "Grow collections." Beyond all dispute those who get the greatest pleasure and interest out of their gardens are those who specialise and who are continually raising their own seedlings. When these seedlings are about to come into flower for the first time, they are like the prodigal son of the Parable, and shut out everything else from our vision, and no words are too extravagant to record our joy of heart.

On the old principle that half a loaf is better than no bread, a very good substitute can be found in growing collections of more or less unknown plants. There is all the excitement of waiting for the newcomers to open, the interest of comparing one with another, and, the classifying of them all according to our own individual taste.

Every year I try to do something like this myself. A springtime without a collection would be like a springtime lost. Luckily, I suppose for me, Tulips and Daffodils lend themselves beyond other families to this purpose. Take Tulips. There are the early Duc van Thols; there are the early singles and the early doubles, and, in the case of the former of these, the many subdivisions into pinks, reds, striped, &c.; there are the Darwins and so on. A pound or even half-a-sovereign spent on a collection of, say, six of a sort of any one of these subdivisions will give a new pleasure. It is much the same with Daffodils. One year let it be Polyanthus Narcissi or Poeticus varieties; then in another it might be trumpets or Leedsis or Barris.

The list might be extended by including Freesias (for there are now named varieties of Van Tubergen's and Chapman's hybrids in commerce, or seed of the Ragionieri hybrids can be procured very cheaply) and Hyacinths, double, single and miniature. This year I have grown some of these in 12-inch pans, and the result has once again shown me their value for decoration. Schotel (bright pale blue), L'Innocence (white), and Winter Cheer (soft carmine) have all been very good. Collections need not, of course, be confined to bulbs. Zonal Pelargoniums, Cinerarias and Primula species or varieties at once occur to me as suggestions of other possibilities. I ought, in conclusion, to say that what I am now suggesting does not mean that no other plants are to be grown except those under trial. Old friends will still find a place; only new-comers will be added as they prove themselves by their flowering behaviour to be worthy of a place beside them. JOSEPH JACOB.

COLOURED PLATE.

PLATE 1446.

GAILLARDIAS AND THEIR CULTIVATION.

WERE we asked to name the most gorgeous and profuse flowering border perennial of the year, the one above all others which makes the garden gay during the dullest weather, or revels in the most brilliant sunlight, we should unhesitatingly select the Gaillardia, or "Blanket Flower," as it

a much more brilliant assembly of these plants, larger and handsomer in flower, more decided and varied in colour, with entirely new and distinct shades added thereto.

For proof of the improvements of which we write, we have but to refer our readers to the coloured plate in the present issue, where some of the newest and best of these Gaillardias are so faithfully reproduced, the flowers being kindly supplied by Messrs. Kelway. To take but two of those depicted in the plate, viz., Glory and Kelway's King, we have at once revealed the contrasting variability of the race, wedded, as it were, to almost wholly self-coloured flowers, or, to be more precise, flower-heads. These we regard as something more than improvements; we look upon them rather as of an epoch-making character, from out of which it is not possible to see what may be evolved in the near future. We remember how distinctly impressed we were some years ago when Vivian Grey, the pioneer of the self yellow class, also of Messrs. Kelway's raising, first came to be exhibited; while in Kelway's King of the present time we see both evidence and influence of this really remarkable break.

The variety Glory is remarkable from an exactly opposite standpoint, in that all the yellow colour has been deleted from its florets save at the veriest tips, where it constitutes a powerful contrast to a flower already conspicuous by its unequalled splendour and brilliancy.

Culturally, these Gaillardias present few difficulties, the plants growing freely and delighting in rich and, for the most part, comparatively light, sandy soils. Those of an opposite tendency, like clay, should have the addition of grit, sand, light manure and leaf-soil—anything, indeed, that will tend to porosity and warmth. The planting should be done without delay. Given these, we know of no plants more desirable, none better suited to effective gardening in massed beds or groups, none more valuable in the cut state, and certainly none more profuse flowering, which alone must commend them to all lovers of hardy border flowers.



THE NEW FREESIA CONQUEST. (See page 106.)

has been popularly called. Further, were we asked to name the person or firm chiefly responsible for the high merit and excellence we see in the present race of these plants, we should as promptly give the name of Kelway and Son, Langport, than whom, probably, none in this or any other country has done half so much towards the improvement of these plants. We speak now of the modern race of the Gaillardia, remembering well the type of former years before the specialisation of the flower began. To-day we look upon

in all gardens. Some of the hardy annuals will give a very quick return of excellent flowers under good cultivation. The following have proved to be among the best for this purpose, and they will grow well in ordinary garden soil providing it has been deeply dug and is sufficiently rich in humus.

The Coreopsis, of which there are many strains, deserves extensive cultivation. The colour of the flowers is brilliant, they have long stalks, and are of long duration. They range in height from 1 foot to 2 feet. Some of the taller-growing

FLOWER GARDEN.

HARDY ANNUALS FOR CUT FLOWERS.

PLANTS which supply quantities of cut flowers are highly appreciated

Candytufts are valuable, their flowers being useful for bouquets. The new strains of this popular annual are very floriferous, and the pleasing rose, pink and snow white flowers are very beautiful. Some very good strains of the annual Chrysanthemum (*C. coronarium*) have been raised during recent years, and many of these are valuable as cut flowers. There are both double and single forms of this annual; they grow from 1 foot to 2 feet in height, and are very free-flowering.

Few flowers are more useful than those of the Cornflower. They are too well known to need any further description. I may, however, add that a new giant blue form of this popular annual

have a particular liking for the tender seedlings, I have found light but repeated applications of soot around the plants as soon as they are through the soil to be one of the best dressings that can be used. I cannot conclude this note without reference to the Sweet Pea, undoubtedly the annual to grow for producing abundant and continuous supplies of beautiful cut flowers.

COLIN RUSE.

SWEET PEA NOTES.

Chipping Seeds.—A practical correspondent takes me to task in a Scottish contemporary on this subject. He does me the honour to quote

deplores the passing of the real Sweet Pea, and laments the growing popularity of the "deformed and too often scentless flower that now bears its name." Is this quite fair? I am not inclined to think so. No one regrets more than I do the fact that the modern varieties are losing some, at least, of the delightful fragrance to which the flower owes its name; but there have been wonderful improvements in other directions, and it seems to be a rule that we cannot secure advancement in all the desirable attributes of a flower. In the Rose and the Carnation, curiously enough, evolution has been marked by precisely the same loss—

that of perfume—which we now have to regret in the Sweet Pea. This would be poor consolation for "An Amateur" were it not for the undoubted fact that those old varieties which are so sweetly scented and so refined of form are as readily procurable as the modern monstrosities, and at a much cheaper rate.

Six Novelties.—First it is Professor Biffen and then it is Mr. H. P. Boyce who urges that I shall give a list of novelties. The latter, on page 79 of *THE GARDEN* dated February 17, suggests that the number should be restricted to six, assuming, perhaps, that by naming such a small figure he is making my task easier; but the contrary is the case, for I could mention twelve or eighteen with less trouble than six. However, I am forced to the task, and call upon all readers who differ from me to send along their lists with a persuasively-worded letter to the Editor asking for publication. My particular fancies for the season are Prince George, a distinct bronze fancy; Mrs. Cuthbertson, a white-winged bicolor; Walter P. Wright, pure light blue; Scarlet Emperor, whose colour will not burn; Barbara, salmon; and Loyalty, violet flake. I await the criticisms with equanimity, since I safeguarded myself behind the

plain statement that these appeal personally to my individual taste. HORACE J. WRIGHT.

THE IBERIAN CRANE'S-BILL.

The Iberian Crane's-bill (*Geranium ibericum*) is a handsome border or large rock garden plant, giving masses of foliage and a profusion of blue flowers and reaching a height of from 1 foot to 2 feet, according to the nature of the soil in which it is planted and the natural habit of the form employed. It is variable in its height, naturally, and its flowers also vary in character and in colour. The typical flower is of a good blue, but the variety platypetalum, which is shown in the accompanying illustration, has these more violet in their hue, with considerably broader petals, thus affording a larger and more shapely flower. It is of rather smaller stature than some of the other forms, and may well be preferred when choosing plants for the rock garden or the border. These Crane's-bills are useful summer flowers, which can be cultivated in almost any soil, although the blooms are finer and last longer if the plants are in a fairly rich compost. Through error, the variety here figured is sometimes called *G. i. platyphyllum*.

S. ARNOTT.



A BEAUTIFUL CRANE'S-BILL (*GERANIUM IBERICUM PLATYPETALUM*) ON A TERRACE BORDER.

is well worthy of a trial. The annual *Gypsophila* (*G. elegans*), both the pink and white forms, should be grown more extensively in small gardens. It requires no special treatment, and is almost indispensable for mixing with other flowers, its inclusion adding a light and graceful effect to vases when used for table and other decorations.

The brilliant and profuse-flowering *Godetias* include some flowers of charming colour, and many of the tall-growing new strains are eminently suited for the purpose under notice. For producing a bold, striking effect when arranged in large vases, few flowers can excel *Lavatera rosea splendens*, a strong-growing annual 3 feet or more in height. *L. alba* is also excellent, although the flowers seem to lack some of the substance which the former possesses. The sweet-scented and universally-admired *Mignonette* should be found in every garden. The *Nigella* (*Love-in-a-Mist*) *Miss Jekyll* is a handsome annual.

Among the numerous family of annual Poppies, the Shirley strain is the most suitable for producing cut flowers, and although the flowers are of somewhat short duration, this is amply compensated for by their brilliant colouring and graceful habit. The Sweet Sultans should be seen more often in gardens. They are very charming flowers and not difficult to grow; but my experience has been that slugs

my paragraph from *THE GARDEN*, in which I deprecated the system of chipping all seeds prior to sowing on the score of time, which was often largely wasted. My critic is a staunch advocate of the method, and recommends his readers to have recourse to it, or, failing that, to soak all seeds for several hours before sowing. I have no personal objection to chipping or filing except the one stated, but I assuredly would not advocate soaking. It does no harm, and may best be described as a pastime of no practical value. Seeds of Sweet Peas may be soaked for an unlimited time, and it will not soften them in the slightest degree, and will not favour even a quick germination. It has been tried repeatedly, and a brother Scot of my friendly critic, Mr. Andrew Ireland of Dobbie's, who ranks in my estimation among the half-dozen foremost authorities on Sweet Peas in the world, has proved to demonstration that soaking is of no assistance whatever. He, however, is substantially a believer in chipping where only a small number of seeds have to be handled, and therefore is partly for and partly against me and my critic. We will, then, call the honours easy.

The Modern Sweet Pea.—On page 66 of *THE GARDEN* dated February 10, "An Amateur"

CHINESE ASTERS AND HOW TO GROW THEM.

ALTHOUGH cottagers and other amateurs have for years realised the value of the so-called Chinese Aster, *Callistephus chinensis*, it is only during the last decade that Asters have entered to any large extent into the decorative schemes of our more pretentious gardens. The appreciation of these flowers during recent years by professional gardeners is no doubt due to a large extent to the vast improvements which have been brought about by our leading seedsmen, improvements which have given us a delightful range of clear, well-defined colours and a great and pleasing diversity of form. Thus, in what is known as the Comet section we get large flowers with beautiful reflexed petals reminding us of Japanese Chrysanthemums; while in direct

Their cultivation is quite simple. The earliest plants are raised under glass, either in a warm frame or greenhouse, and the present is quite early enough for the first sowing. Another batch should be sown towards the end of March, and for this a cold frame answers well. Outdoor sowings may be made, where the plants are to flower, from the middle of April until the second week in May. Sown at different times as suggested, Asters may be had in flower over a considerable period. For sowing under glass, use boxes or pans about three inches deep, and see to it that they are well drained. Good loam two parts, decayed manure or leaf-soil one part, and sharp sand one part, the whole passed through a half-inch-meshed sieve and thoroughly mixed, makes a good soil for seed-sowing. After the boxes or pans have been well drained and some rough soil placed over the drainage, fill the receptacles with the sifted soil, so that when it is pressed

from the outset. It is safe to assert that many thousands of plants are annually ruined through being subjected to too much artificial heat; those sown at the end of March and grown on in an entirely cold frame are usually the best.

When the seedlings are about one and a-half inches high, they must be pricked off 3 inches apart into other boxes or pans filled with soil similar to that advised for seed-sowing, except that it need not be so finely sifted. Shade from sunshine for a day or two after pricking off, and then grow on as near the glass as possible so as to keep the plants sturdy. Towards the end of April and during the first week of May remove the frame-light altogether during the daytime, and about the third week in May the plants may be safely planted out in the open.

Chinese Asters appreciate a rich and rather cool soil, hence where they are to be grown should be



ANNUAL ASTERS IN THE GARDENS AT THE OLD HALL, FRITTON, NORFOLK.

contradistinction we have the Pæony-flowered, with their globular heads, and the ordinary single and ray types, as well as several intermediate sections. Thus in form alone there is sufficient variety to please the most fastidious, and as seeds of nearly if not quite all sections can be had in separate colours, it is possible to carry out a delightful colour-scheme with these Asters alone.

moderately firm it is rather more than half an inch from the top. Scatter the seeds thinly and cover with sharp, clean sand. This is better than soil, as it keeps the collars of the seedlings comparatively dry, and so prevents that decay usually known as damping off.

Seedling Asters should always be grown as sturdily as possible, and with that object in view afford them all the ventilation that is reasonably possible

deeply dug and rather heavily manured, using manure that is fairly short and well decayed, and see that it is thoroughly mixed with the soil. About a foot apart each way is a good distance to plant Asters. The accompanying illustration, which aptly portrays the flowering capabilities of Asters when well grown, is from a photograph taken in the gardens at The Old Hall, Fritton, near Great Yarmouth, Norfolk, the seat of W. A. Ward, Esq.

SPRING IN THE OUTDOOR GARDEN.

THE Editor asks me to contribute to the Spring Number, but on such a day! True, the cruel east wind of the last week has departed in the night, and the frost and snow it brought, deprived of their sparkling beauty, are slowly turning to slush and moisture; but at such a moment of transition it is with feelings of singing a Song of Zion in a strange land that I sit down to write of spring. How can I forget that we have lately registered 24° of frost in open places of this neighbourhood, that the cold snap came suddenly after a spell of abnormally mild, damp weather, so that almost everything was in sappy, forward, unhardened growth, and now, most likely, many of the more tender possess ruptured vessels, like burst water-pipes, that will not show the results of their destruction until the thaw is complete? I simply cannot call up visions of purple cataracts of Aubrietias or creamy and buttery drifts of Daffodils in the meadows. I do not know why, but a broad stretch of them in the grass is always associated in my mind with these dairy products, especially when seen in the distance.

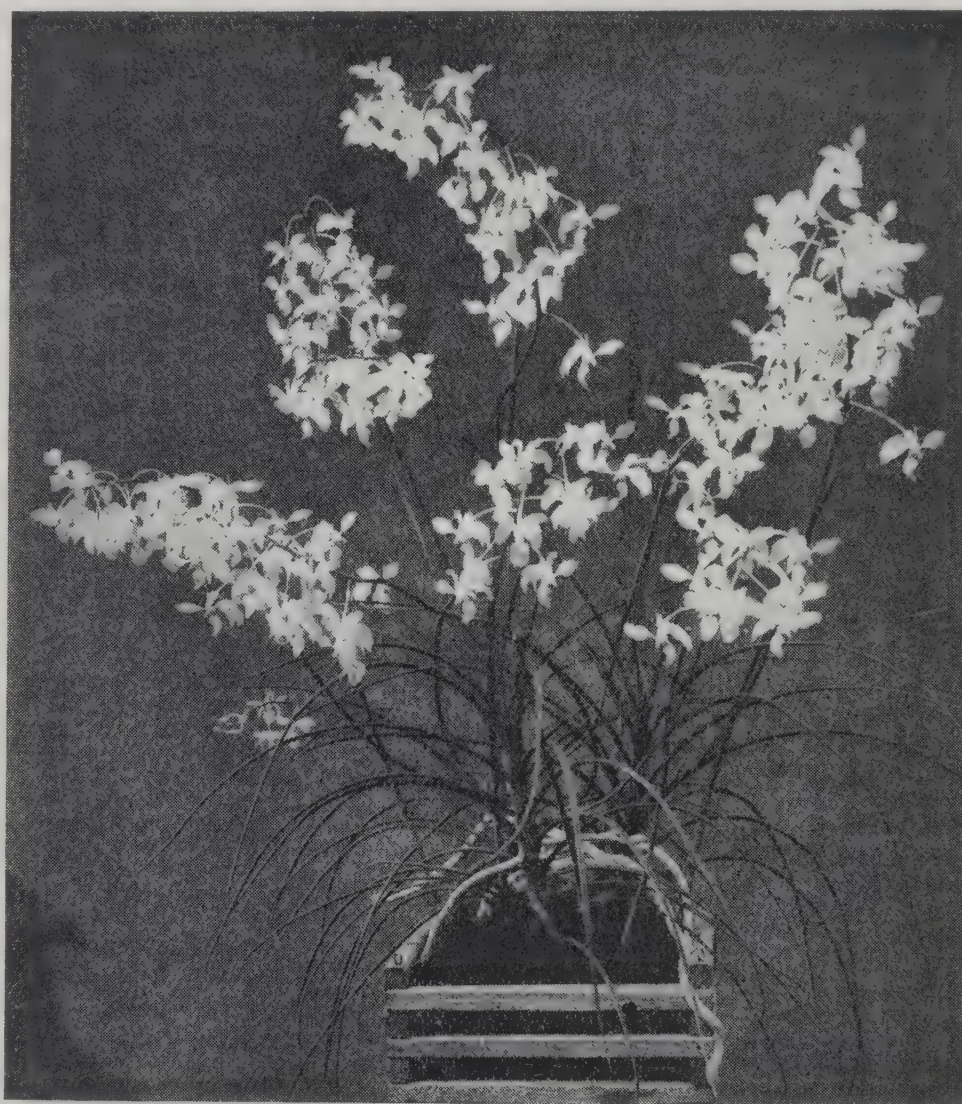
No; I will not try to write of what is to be, or I may next find myself comparing the hues of Darwin Tulips with raw meat. I will write of the stern present and its visions of Hope. Even on this gloomy, cloudy, muggy day the drizzling rain is softening the ground and spring plants are pushing through, and there is much of interest to be noticed in their manner of resurrection.

One that really *pushes* is the Winter Aconite; "thrusteth up divers leaves," as Parkinson puts it. It seems as though it feels it must be first in flower in the New Year. Doubtless in its native haunts in Central Europe it gains some advantage by this hurry—a greater certainty of insect visitors to the quaint little trumpet-shaped nectaries that represent, as in its close relative the Hellebore, the floral whorl that men call petals in other flowers. Its method of winning the race for priority repays examination. To do so, dig up a root or two in late December and keep them in a warm room covered with damp moss or sawdust. They can then be examined at daily intervals, and it will be seen that the secret of success lies in its habit of forming leaves and flowers below ground, and bringing them to a higher degree of development there than do most plants. While still well wrapped by four protecting scales, the stem begins to lengthen at the end furthest from the flower-bud, which, being firmly held by the scales, is bent over until the growing portion of the stem develops into an arch. It continues to grow faster at the base than near the bud, until the summit of the arch reaches the surface of the ground and the bud is lifted upward from the protecting scales, but still in this inverted position, and all the work of "thrusting" is still done by the upper portion of the arched stem. Thus on the softening of the surface, when the

snow melts, a few warm hours are sufficient for the straightening of the stem, and the bright yellow flowers, sitting so short-neckedly in their green ruffs, are ready to receive any stray bee or fly that is on the look-out for a sip of honey. As these alight in the centre of the flower, cross-fertilisation is easily effected.

The same method of thrusting is employed by the flower-spikes of Epimediums, some Hellebores, Wood Anemones, Corydalis and, of course, many seedlings, French Beans, for instance, all of which use the bent stem to push a way through the soil for the delicate leaves or flowers.

But quite a different one is that used by Snowdrops and Daffodils. Here we find the tip of each leaf thickened into a fleshy, colourless, hardened cushion, and when they first appear



A WELL-GROWN PLANT OF VANDA WATSONII FROM LIEUTENANT-COLONEL SIR GEORGE HOLFORD'S GARDEN.

above the sheathing leaves they are pressed so closely together as to form a cone, the summit of which is this tough white point, an instrument admirably adapted for piercing a way through rough soil without receiving injury. Forbes Watson has much to say of the beauty these delicately-tinted light points add to the general effect of the narrow blue-green leaves—too much for me to quote here, so I will only remind my readers that his somewhat fanciful but withal faithful descriptions of the charms of our favourite spring flowers well repay an annual reading ("Flowers and Gardens," by Forbes Watson).

In the Crocus these hardened leaf-tips take the form of sharper points, and it is not now a matter of two outer ones facing each other to form a piercing point, but the tips of many leaves brought close together by the tightly-wrapping sheathing

leaves, and thus united their strength is wonderful. Canon Ellacombe has recorded how a group of Crocuses were left buried under a gravel walk made to cross the border in which they grew, and that year after year they never failed to pierce through the surface of the well-rolled gravel.

When collecting wild species of Crocus near Athens some years ago, I was much interested in noticing that many of them reappeared every season in the exact line in which their leaves had pushed up ever since they began life as a seedling. This was especially noticeable with *C. cancellatus*, whose corm tunic is made of such tough reticulated fibre that it lasts undecayed for many years. I found many of the corms were wearing the old tunics of fifteen previous years, and the growths of the present season had speared right through the centre of four others, each of which was a size smaller, as it was placed further away from the present position of the corm. These latter were, of course, the tunics of the seedling in its first to fourth years, and had been left behind in the track of loosened soil, through which the corm had been annually pulled a little deeper until it reached the depth suited to it, and up this slightly looser track of soil the annual growths of nineteen years had travelled to reach the surface. When competing with the wild grasses and other plants, it seems from these Greek species and others I have collected myself or had sent to me just as collected, that increase by multiplication of the corms is but small, seed being the chief means of increase in a wild state, and I find that if rapid increase by corm division is desired, careful cleaning off of old tunics and fairly shallow annual replanting give better results than deeper planting and less frequent lifting.

I hope before this is in print the sun may again be shining and the beauty of open flowers be with us, but that a few later forms may still be thrusting through, and that some of my readers may be induced to notice their methods of reappearance. There is always something of interest in the garden, but the spring is, perhaps, the most delightful season of all.

E. AUGUSTUS BOWLES.

Myddelton House, Waltham Cross.

VANDA WATSONII.

THIS pretty Vanda was introduced by Messrs. Sander and Sons of St. Albans, through their enterprising collector Micholitz, from the Annam district, where he found it growing at an altitude of 5,000 feet. It first flowered in the Glasnevin collection, and was named in compliment to Mr. W. Watson, the able Curator of the Royal Botanic Gardens, Kew. The illustration depicts a grand example bearing seven scapes of its chaste white flowers, which was shown at a recent meeting of the Royal Horticultural Society by Lieut.-Colonel Sir G. Holford of Westonbirt, Gloucestershire. It is a somewhat rare plant, and is nearly allied to the well-known *V. kimballiana*.

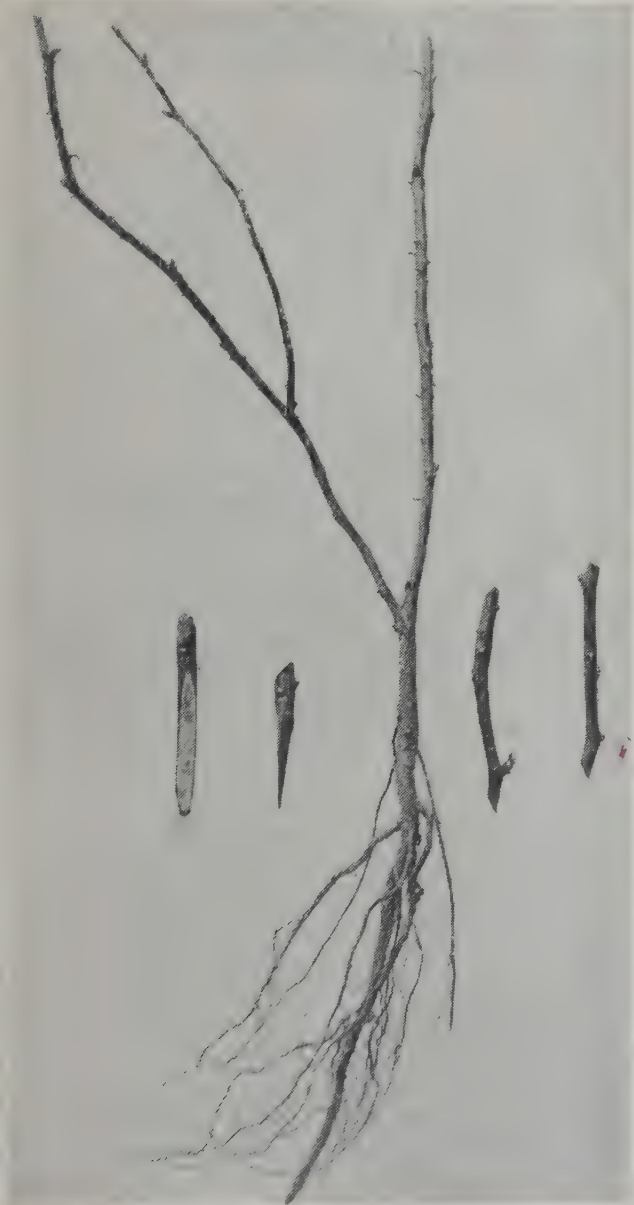
S.

THE ROSE GARDEN.

HOW AND WHEN TO GRAFT ROSES.

THERE are, I have no doubt, some readers of THE GARDEN who would like to try their hand at grafting Roses under glass. It is the method of propagation chiefly adopted by professional growers to increase their stock of new Roses, and the ardent amateur, should he desire to have a quantity of plants of any given new Rose, may soon obtain them by this method. For instance, supposing he admired a particular sort at the summer shows, and was unable to procure buds, a pot plant purchased now could be cut up into quite a number of grafts or scions (see Fig. 1), and by June he would have a dozen or two nice little plants to plant out or to grow on for forcing next winter.

The Stock (see Fig. 1) usually employed for Tea and Hybrid Tea Roses is the seedling Briar. Some growers, especially those in America, use the Manetti stock for the Catherine Mermet tribe, and others prefer it for the old Niphetos Rose, as it produces plants double the size of the Briar, and the blossoms are a purer white. The stocks are potted up into 3-inch pots by some propagators the year before, but others equally prefer to pot them up only a few weeks before using them. They should be fully as thick as an ordinary lead pencil, a little stouter, if possible. When potting, the



1.—SEEDLING BRIAR AS DUG UP FROM NURSERY BED; ON RIGHT, SCIONS OR GRAFTS; ON LEFT, THE SAME PREPARED FOR UNITING TO BRIAR OR STOCK.

roots must be cut back rather severely and the tops shortened to a few inches. The graft is put on just above the roots as seen in (see Fig. 2). It is really the stem between the branches and the roots proper. It will, therefore, be seen that straight-stemmed Briars are essential.

The Scions or Grafts are best obtained from plants that have been grown under glass, the object being to obtain good, well-ripened wood; but after such a season as the last, many grafts could be obtained from outdoors. It is useless to put on pithy wood. If unable to get good wood at first, grow the plant on, and then green or herbaceous grafts are obtainable, *i.e.*, wood that has just flowered under glass. This wood, put upon stocks that are also in a growing state, usually succeeds well, and it is a method much used by nurserymen to increase their stock of new Roses. The first batch of grafts of a new Rose put on, say, at the end of December will by February be grown so much that their tops can be utilised for grafts. This is not at all conducive to a good, sturdy stock of plants, and it is owing to this practice that many new Roses become thoroughly weakened before they are grown by the amateur. It is a great pity, because such plants can never be of any use, and only tend to give the variety a bad name.

A Propagating-Frame is necessary where a good number are to be grafted. This should be placed in the warmest part of the greenhouse, in the centre, if possible, so that it is away from the outside walls. The lights should be tight fitting. Usually such a frame is arranged over the hot-water pipes, slates being used to form the bottom of the case, upon which Coconut fibre or ashes are placed. There must be a temperature of about eighty-three degrees to eighty-five degrees maintained day and night, and unless this is possible it will be useless to attempt the work of grafting. When about to carry out the operation of grafting, two nails are driven into a stout board and the small pot containing the stock laid between. The top of the stock is cut off, leaving just the collar above the soil. Cut up the grafts into lengths of about two inches and, if possible, containing two eyes or buds (see Fig. 1). Take the graft between the thumb and finger of the left hand and make a slanting cut of about three-quarters of an inch with a sharp knife (see Fig. 1). A similar cut is now made on the stock and the two joined together. They should fit perfectly on both sides, if possible; if not, then on one side. The graft must now be tied firmly on to the stock (see Fig. 2). Prior to grafting, the stocks should have been well watered, and will then need no water for some five or six days after being grafted.

After-Treatment.—The grafted stocks are placed in the propagating-frame as soon as grafted, and the frame kept quite close and shaded from bright sun by newspapers. After about the sixth day a little air is given for half-an-hour each day. This is done by putting a label of about an inch wide just under the glass light. Each morning the latter should be raised for a few minutes and the moisture wiped off. The plants must be looked over and watered where really necessary; but this is a very delicate operation and must be carefully carried out. No water should be allowed to go upon the grafted part, so that it is best to lift each plant out and water it when required. The amount of air given should be increased each day until the fourteenth day, when the light may be hooked up to the roof of the greenhouse. After about three weeks the little plants, which have now made growth an inch or more



2.—LEFT, STOCK OR BRIAR WITH TOP CUT OFF AND PREPARED TO RECEIVE SCION; RIGHT, SCION AND STOCK SPLICED TOGETHER OR GRAFTED.

in length, may be lifted out and put on the side staging where there is bottom-heat. Sprinkle the hot-water pipes in the morning to create a dew, and be very watchful that no plant suffers from lack of water. Allow them to have the full sunlight now. When the little white roots are seen emerging from the hole in the pot, the plants are ready to pot on, and may be placed into 5-inch pots. The compost should consist of two parts sifted loam, one part leaf-soil, one part well-decayed manure and a little sand. Pot firmly and keep the plants in a temperature of about fifty-five degrees by night. As the plants grow, give each one the support of a little stick, and stand them well isolated so that every leaf catches the light and air. Shift them on into larger pots if required for forcing next season; but if not, gradually harden off and plant outdoors in June.

It may be helpful to some amateurs if I state here that these potted-up Briars may be budded in July with any choice variety, and afterwards forced in growth the following spring. This plan is really simpler than grafting, and is a good one to adopt where one wishes to increase one's stock of a seedling Rose. The Briars for this purpose would be best potted up into "Long Toms," or 4-inch pots, during the winter, and then placed outdoors, plunging the pot in ashes. Keep them well looked after through spring and summer, so that they are kept growing. In July, when sap is flowing freely, insert buds in the "collar" (Fig. 1 d). The tops are, of course, kept on, but in January they are cut off down to the inserted bud, and the pots are then placed in a greenhouse with a temperature of about fifty-five degrees by night. The "buds" soon commence to push out, and by May fine little plants are obtained, which may either be potted on or planted outdoors. P.

THE KITCHEN GARDEN.

ROOT CROPS.

BRIEF CULTURAL NOTES.

THE present season, the most important one in relation to root crops, affords me an opportunity of dealing with a few of the most valuable, which I hope may be of service to those who are not well conversant with the same.

Potatoes.—These I will deal with first, as they form the staple crop in most gardens, large or small; and though their culture is generally understood by many, I may be able to embody a few notes of value to some. Good drainage of the land is of primary importance, and unless this is present, subsequent treatment will prove of little avail. The situation should be an open one, where the crop will get the maximum amount of sun, and the ground should be free from the roots of large

rub a little, this will not matter. The varieties to grow are those that crop best, keep well and do well in the particular locality. Two general favourites, however, are Windsor Castle and Up-to-Date.

Parsnips.—This is a valuable winter crop and none more so when the Brassica family are scarce. There should be no delay in getting the seed of this crop sown. Avoid newly-manured ground, as this is conducive to scab and deformed roots. Before sowing, knock down the surface with a fork, and if some wood-ashes and soot are sprinkled on so much the better. Rake over with a wooden rake, removing rough stones, draw shallow drills 18 inches apart, sow the seed thinly, and finish by raking over the surface neatly. Tender and True, The Student and Hollow Crown are all excellent varieties.

Onions.—The main crop of these are best sown at the earliest possible date after the beginning of March, when the ground admits of treading,

enriched and worked, and afterwards well trenched or dug. Prepare a good seed-bed by forking over, and at the same time work in a good sprinkling of lime rubble, wood-ashes and soot; especially valuable is this on heavy soils. Draw drills 18 inches apart and sow the seed evenly and moderately thickly. When the seedlings are well above ground, thin out to a foot or so apart, leaving the best, of course. When lifting the crop, care should be taken not to break the roots in any way, otherwise their quality will be impaired. The whole should be lifted when perfected and stored in fine ashes, soil or sand. Dell's Dark Red is an excellent variety, as is also Sutton's Blood Red. Globe or Turnip-rooted are generally grown for earlier supplies.

Carrots.—The main crop of this vegetable will need to be sown during the month of April when the soil is in good order. Earlier sowings may be made now at any time on a warm border of the quicker-maturing, stump-rooted varieties. For the main crop, however, for keeping, select an open site in the garden, fork over the ground as advised previously, and remove all rough stones, &c., with a wooden rake. Draw drills 12 inches to 15 inches apart, and sow thinly and evenly; thin finally to a distance of 9 inches apart. For obtaining specially good roots free from blemish for exhibition, where the natural conditions will not allow, special means must be adopted by boring holes and filling them with a fine sandy compost. New Red Intermediate is the best variety I know.

Turnips.—To obtain really good Turnips, they require growing as speedily as possible, and frequent small sowings should be made to maintain a supply of young roots. Sowings may be made at once on a warm border, drawing the drills 9 inches or 10 inches apart. Thin the young plants as early as possible, so that they do not become crowded, finally leaving them about nine inches apart. For late supplies sow in batches between the end of July and September. Dry weather is disastrous to the well-being of Turnips, and for summer supplies it is well to mulch the crop with short grass mowings or other suitable material, as well as selecting the shadiest position. Varieties are numerous. Early Red and White Milan are good for early supplies, Snowball and Jersey Lily for later sowings, while Red Globe is an excellent variety for summer supplies, and Prizetaker for the latest.

E. BECKETT, V.M.H.

(To be continued.)



A NEW DWARF CAULIFLOWER: BATH'S RELIABLE.

trees which only impoverish the soil. The land for Potatoes is best if turned up early in the winter and allowed to lie rough just prior to planting. The best soil is undoubtedly a good loamy one, not too heavy, and containing plenty of lime. Too much stress cannot be laid upon the importance of the seed, and I would strongly urge a change from a distant source, such as Ireland or Scotland, where it is possible to do so. The seed or sets should be laid out thinly in a light, airy structure where the sprouts will not become drawn. Planting will vary, according to the neighbourhood, from the middle of March to the end of April, but the earlier it can be carried out with safety the better. For planting I prefer to take out a deep drill, and, where the land is retentive, place the tubers evenly apart on decayed leaf-soil or strawy manure. Avoid planting too thickly, and as soon as the growths appear hoe the ground to keep weeds in check, and mould up the soil to the growths. Lift early is my motto—as soon as growth is completed—and though the skins may

as Onions like a firm ground. Assuming the land was well prepared by digging or trenching early, knock down the surface as advised for Parsnips, level with a wooden rake and well tread. Draw shallow drills 10 inches to 1 foot apart, and sow the seed evenly and not too thickly. Heel in the soil and tread the rows in the opposite direction, and finish off the surface neatly with an iron rake. For maincrop Onions sown in the open ground I do not advise severe thinning, as is sometimes practised, as a greater weight is secured and the bulbs are much better ripened, though, of course, they are not so large. Where large bulbs are needed, I prefer planting out young plants next month that have been raised under glass. For keeping, James' Long-Keeping and Sutton's Improved Reading are both excellent.

Beetroot.—It is a mistake to sow this crop too early. The end of April for the main crop will be soon enough. The ground should not contain too much green manure, it being a good plan to follow Celery, for which crop the soil was well

A NEW DWARF CAULIFLOWER.

THOSE who know and appreciate Autumn Giant Cauliflower will be interested to learn of a dwarf-growing variety possessing the same excellent properties. This is Bath's Reliable, an illustration of which is given on this page. It is being sent out this year by Messrs. R. H. Bath, Limited, The Floral Farms, Wisbech, and has, no doubt, a rosy future in store for it. This new Cauliflower is of much dwarfer habit than Autumn Giant, and may be planted considerably closer than that variety. It produces immense pure white heads, quite as large as, or larger than, those of Autumn Giant. It has this distinctive feature: that the leaves protect the flower as in the Self-protecting Broccoli. As the variety is in season during August and September, when the sun is frequently very hot, the advantage of protection of the flower from the sun's rays is very marked, as the flowers then are enabled to retain their whiteness for a considerable period.

GARDENING FOR BEGINNERS.

THE CULTIVATION OF THE HIPPEASTRUM.

MARCH is the month when the Hippeastrum, or, to give it the more common name in gardens, Amaryllis, should be repotted. Not all of the bulbs, however, will need repotting, for those which are large and well established, say, in 7-inch pots, will only require, to be top-dressed with a good fibrous loam mixed with leaf-mould and a sprinkling of bone-manure. The top-dressing or repotting should take place early in the month, just as the bulbs are showing signs of growth. Large bulbs should flower about a month after top-dressing, and it is usual for the flowers to appear in advance of the leaves. No hard-and-fast rule can, however, be laid down in regard to the time of flowering, as this is governed by the time of starting the bulbs into growth.

Repotting.—Those bulbs which have not yet reached the flowering stage should be taken out of their pots and all of the old soil shaken out from the roots; this may be done with the aid of a pointed stick. Care must be taken to avoid overpotting, and the bulbs should be kept about two-thirds above the soil-level. No pains must be spared to see that the soil is well filled in among the roots. Finally, the soil must be made firm, not simply on the surface, but throughout the pot, and this is done with the aid of a potting-stick or rammer. The potting compost should be similar to that recommended for top-dressing, with the addition of about one-tenth part of silver sand.

After Potting they should be plunged in tan, Coconut fibre or leaf-soil, over bottom-heat, in a temperature of about sixty-five degrees. A little shade will be necessary at first, also at the time of flowering; but later on the plants will revel in sun and air. Throughout the growing season—that is, from now till September—the plants require syringing, and a fair supply of water at the roots, after which they should be rested in their pots, (not dried right off) until the following February or March, when they are once again started into growth. An abundance of air must be given in the summer, when both top and bottom ventilators may be left wide open in hot weather. This will enable the bulbs to become well ripened, which is a great advantage.

Propagation is effected by offsets and seeds. The former operation is carried out when the bulbs are resting. In Fig. 2 is seen an old bulb with numerous small ones, or offsets, surrounding it. These may be removed now, at the time of top-dressing or potting. The offsets should be potted singly in small pots, and grown on as already recommended. The flowers of the offsets are, of course, identical with those of the parent bulb, and named varieties are always increased by this method. Seeds of first-class strains may be had from a shilling a packet upwards, and although it may mean waiting two years before the first flowers, the results will more than justify the time spent in growing the seedlings to the flowering stage. In

Fig. 1 is seen a seedling in full flower. It will be observed that the anthers and stigma are very prominent; for this reason it is an easy flower to manipulate—that is, for those who would like to cross-fertilise and raise their own seedlings. Such work is intensely interesting, and there is always the glorious uncertainty that something special may turn up in the seedlings. The seed should be sown as soon as ripe in well-drained pans filled with sandy loam. A temperature of 65° is best for germination, and the seed-pans should be kept shaded until the seedlings are better able to take care of themselves. Pot them up as soon as they are large enough to handle, and grow them as recommended for the older bulbs, with the difference that they should not be dried off in the first winter, but be kept growing all the time. The young plants will then make rapid progress. SPARTAN.

HOW TO TREAT FORCED BULBS.

In many instances the bulbs that have been forced in pots, pans or boxes are discarded when the flowers have been cut or have faded. It is a waste of really good material. We cannot expect



2.—PARENT BULB WITH OFFSETS. THE LATTER ARE READY TO BE REMOVED AND POTTED UP.

the bulbs to produce such fine flowers a second year; but strong bulbs, well matured, invariably grow and flower freely for many years after they have been subjected to a forcing temperature. Undoubtedly the great heat of last summer ripened many thousands of English-grown bulbs very well, and now they are throwing up strong flower-stems again in the open borders. Directly the flowers have faded or been gathered, place the pots containing the plants in a frame with a sunny aspect. Gradually diminish the water supply. In June or early in July plant out the bulbs in the borders. Roman and named Hyacinths, Narcissi, Tulips and Jonquils are the best to plant in odd borders or in shrubberies where it will be possible to leave the bulbs undisturbed for a number of years. B.

PLANTS TO PROPAGATE ON HOT-BEDS.

A FRAME placed on a hot-bed at this season of the year is a very valuable asset in any garden, especially where the propagation of bedding-out and greenhouse plants is necessary. If a new hot-bed be built, some litter should be put in after the frame has been placed in position, so as to raise the cuttings nearer the glass when inserted. A layer of Coconut fibre 4 inches deep should be put on the litter, and the pots and boxes containing the cuttings plunged in it, so as to ensure an even temperature around the base of every cutting. The outer portion of such a bed is the coolest, and there the Zonal Pelargoniums must be put. Next to them insert Ageratums, Fuchsias and Heliotrope, and in the centre Coleuses, Iresines, Mesembryanthemums and the Lemon-scented Verbena. For the Pelargoniums the chief ingredient in the compost should be good loam; for the other kinds, loam and leaf-soil in equal proportions. Of course, sand must be freely added to the mixtures. AVON.



1.—SEEDLING HIPPEASTRUM IN FLOWER, TWO YEARS FROM THE TIME OF SOWING THE SEED.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Plant-Houses.

Gloriosa superba.—Now is the time to pot the tubers of this showy warm-house climber. Use a rich compost and pots sufficiently large to accommodate them through the season. Water very sparingly until growth is active.

Ivy-Leaved Pelargoniums make fine subjects as climbing plants in the greenhouse. This is a good time to repot or top-dress. At the same time thin out and regulate the growth.

Bougainvilleas.—Few greenhouse climbers are more effective. If treated as stove plants, too much growth is made at the expense of flower. Now that growth is beginning, prune back last year's wood, which will induce the plant to bloom profusely.

Swainsona galegifolia alba is a fine plant for training up the rafters, and almost continuous blooming. Assist the plants with properly-diluted farmyard manure. *Cassia corymbosa*, *Plumbago capensis* and *Streptosolen Jamesonii* are likewise easily restricted to a small area.

Caladiums.—These will need starting without delay in a warm structure. The small-leaved varieties, *C. Argyrites* and *C. minus erubescens*, are splendid for the front of the stage, and are best grown in 3-inch pots. The larger-leaved varieties are best started into growth in small pots, and then repotted when roots are active. Maintain a humid atmosphere and avoid over-watering.

The Kitchen Garden.

Turnips.—A small sowing may now be made on a south border on ground that has been well prepared. Make a good tilth by knocking over with a fork, afterwards raking down. Draw shallow drills 10 inches apart.

Carrots.—Sow seeds of an early-maturing, stump-rooted variety in a similar manner.

Onions.—The main crop may be sown now. The ground should have been left in as rough a state as possible since digging or trenching, and now will need forking over. If some wood-ashes and soot are incorporated, so much the better. An Onion-bed must be firm, and consequently the ground must be sufficiently dry to admit of treading. Draw shallow drills 10 inches to 12 inches apart, and sow the seed thinly and evenly.

Peas.—The earliest sowings that were made in pots will shortly be ready for planting out, so thoroughly harden off before doing so. Avoid planting too thickly, and draw a little soil up to the plants. Stake as early as possible, according to the height of the variety. A few Spruce boughs placed beside the rows will be found a great protection for a few weeks.

Potatoes.—In favoured positions the earliest plantings may be made out of doors, such as between the earliest rows of Peas or under a warm fence or wall. The sets for the maincrop varieties should be laid out thinly in a light, airy structure, so that the growths do not become drawn and thin. A change of seed is to be recommended from a distant locality. Both Scotch and Irish grown are excellent.

The Flower Garden.

Pansies and Violas.—Sow thinly in well-drained pans or other receptacles and stand in a cold frame, preferably on a mild hot-bed.

The Rock Garden.—This will shortly need a thorough cleansing, weeds and other refuse removed, the soil lightly forked up and a top-dressing of fine soil given. Plants that have been wintered in cold frames, plunged to the rims of the pots and not coddled in any way, may now be planted out in their permanent quarters.

Slugs.—These soon do an immense amount of harm if allowed to go unchecked. Pieces of Carrot or Turnip, or leaves of Cabbage or Savoy, placed about will often be found harbouring them, and bran will disclose their tracks. An excellent plan is to search for them at night, when feeding, with a good light.

Hoeing.—This is very important, and whenever the ground admits of the Dutch hoe being run through the soil, this should be taken advantage

of, as it not only keeps weed-growth in check, but aerates the soil and proves beneficial.

Hints on Orchids.

Calanthe Veitchii.—Now that the flowers are past, the plants should be allowed to rest in a warm house; lay the pots on their sides so that no water can reach the roots.

Cypripediums.—The potting of these popular subjects is generally best performed soon after the flowers are past. If the plants are too large, divide them and pot into smaller receptacles. The compost consists chiefly of fibrous peat, sphagnum moss, a little fibrous loam, finely-broken potsherds and silver sand. Water sparingly after potting, but keep the surroundings moist and warm.

Odontoglossums.—Support the spikes with a thin, neat stake as they are being formed. It is a good plan to tie a tuft of cotton-wool at the base to prevent insects approaching the flowers.

Hardy Fruits.

Strawberries.—The ground between these, especially if of a retentive nature, should be lightly forked up, and a thin dressing of well-decayed farmyard manure placed over it.

Early Flowers.—In warm, sheltered positions, early Peaches and Apricots will soon be showing colour, and a slight protection will prove advantageous, if only a thickness or two of old fish-netting.

Fruits Under Glass.

Figs.—Early-forced trees, whether permanently planted or in pots, will require attention to the growths. Excepting the leading growths required for extension, the first opportunity should be taken of stopping the young growths at the fourth or fifth leaf, to induce the formation of fruit. Keep a night temperature of from 55° to 60°, according to the weather. Syringe twice daily whenever the weather permits, and close the house early in the afternoon.

Melons.—Encourage the growth of these by maintaining sufficient heat and keeping the surroundings moist and the plants syringed. Where the single cordon method is adopted, allow the plant to continue its lead uninterrupted, removing any side growths until the trellis is reached. Avoid wetting the stem of the plant when watering, which is apt to accelerate canker.

Orchard-House.—The trees in this house, until the flowering stage is reached, should be allowed to come on quite naturally. Admit plenty of air on all favourable occasions. Syringe the trees when not in flower, always early enough to permit of them becoming dry before nightfall. Water carefully, and though the plants must not be allowed to become dust dry, the reverse is just as detrimental. E. BECKETT, V.M.H.

Aldenharn House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Plant-Houses.

Calceolaria Burbidgei.—Put in cuttings now. They strike freely in a hot frame and provide useful plants for flowering in winter.

Adiantum cuneatum starting into growth should have rusty fronds removed and be repotted into larger pots if desired. Those in large pots should have a portion of the old soil removed and be returned to the same pots.

Hippeastrums are now pushing their flower-spikes, and those not repotted will require a fair supply of water. Repotted bulbs, on the contrary, will require little water at the roots. Last year's seedlings should have a further shift. Usually 4-inch pots are suitable.

Show Pelargoniums now in 5-inch pots should be shifted on into 7-inch ones. They are easy to cultivate, but must have perfect drainage and a compost of rotted turf, leaf-soil and sand. Water carefully till re-established, and fumigate for aphids as soon as it is noticed. Weak growths should be removed.

The Fruit-Houses.

Vineries.—Keep the Late Hamburgh and Lady Downe's vineries cool and airy. Vines started in November will have bunches ready to thin,

which should be done without delay. The Muscat house will now require the temperature raised to 55° or 60° at night and 10° higher by day.

Melons sown six weeks ago should now be transplanted into narrow and not deep beds of turfy soil. Keep up the stems to avoid canker.

Tomato Seeds.—Sow a large batch to produce plants for planting in pits freed from their occupants in May. Supreme is a good sort, but there are many equally desirable.

The Flower Garden.

Roses.—Prune the hardier climbing sorts growing on trellises. See that all kinds of climbers on walls are securely fastened and those pruned that need it.

Ventilate Frames freely in which rooted cuttings of the hardier flowers are growing. In fine weather the sashes should be removed altogether. Plant out young specimens of *Anthemis tinctoria* and its varieties. It gives a brilliant effect in large masses grouped near the front of a mixed flower border, and associates well with Lavender.

Galtonia candicans.—A batch of this should be planted. It is, unfortunately, subject to bulb disease, and it is worth while to isolate each bulb in a mass of sharp sand as a possible preventive. Plant 4 inches to 5 inches below the surface.

Dahlias.—Start old tubers in not too high a temperature to produce growths for cuttings. Leaf-soil and Cocoanut fibre are good materials to lay the tubers in. Both are easily kept moist with constant watering. Do not use the earliest growths, but cut them over, and the next and succeeding growths should be utilised.

Bedding Plants.—Tips of Lobelias, Verbenas, Heliotropes, &c., inserted in boxes of light soil, covered with glass and stood in a house with a high temperature, root in a very short time. I usually arrange these so that they stand in the same boxes till required for the flower garden. *Salvia splendens*, *Ageratum* and coarse-growing kinds are rooted in sand in a hot frame and transferred to boxes when well rooted. Place *Chrysanthemums* and *Lobelia cardinalis* in warmth to make growth.

The Vegetable Garden.

Lettuce, Radish and Spinach.—Sow these now, the last-named in sufficient quantity to give daily pickings.

Second-Early Peas.—Sow a good breadth of these in rather shallow drills and thicker than at a later date. Mound up the drills to give depth.

Peas in Boxes.—The earliest Peas are late on account of the weather, and where these are essential, seeds sown thickly in cutting-boxes, germinated in heat and grown on in a cool structure to be transplanted out of doors, will come in early enough.

Cucumbers.—The earliest should now be growing fairly freely, and will ask for renewed dressings of rough turf and rotted manure at brief intervals. Heat and moisture are essential.

Brussels Sprouts and Autumn Giant Cauliflowers sown now in prepared beds in a cold frame, which should be kept quite close till the seedlings appear, provide capital plants for setting out at the end of May.

Vacant Ground that was dug or trenched in autumn, but not manured, provided manure is required, should be dressed with partially-rotted farmyard manure and the latter dug in without delay, smashing all rough clods at the same time.

The Hardy Fruit Garden.

Gooseberries.—Watch that birds do not eat the buds of these.

The Fruit-Store.—See that no fruit is left to decay in the fruit-store. Apples have matured earlier than usual this year.

Espalier Trees and those on covered walks should be tied to the wire, and the surface over the roots made neat and tidy. If surface-dressed in autumn, the remains of the manure may now be removed.

Strawberries.—One and two year old Strawberry-beds may be benefited by manurial surface-dressings; but in strong, holding soil these in general are not required. Hoe all the bare ground deeply when the surface is dry and friable, and make the outer edges of the beds trim and neat.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Ribes laurifolium.—We were impressed more by the distinctness of this new Chinese species rather than by its present promise of any garden merit or value, its greenish white flowers rendering it anything but a plant of the decorative order. Of what value it might presently prove to the cross-breeder and raiser of new plants remains to be seen. For the moment it appears to be a plant of botanical interest only. Exhibited by the Hon. Vicary Gibbs, Elstree.

Carnation Lady Meyer.—The high merit and excellence of this handsome pink-flowered Carnation has at last received recognition, and, if tardily, no variety has, we think, obtained it more worthily. Briefly described, it is a greatly-improved Enchanteress, a flower of somewhat deeper colouring, and minus the hard-cored incurving centre of the old variety, which causes it to respond slowly in sunless weather. Lady Meyer, on the contrary, has fewer central petals, and these, being more uniform, respond more readily. It has been exhibited on several occasions during the worst of the winter season, and the fact speaks volumes in its behalf. Strength and length of stem are among its good attributes. Exhibited by Mr. E. Guile, Newport, Essex, and by Messrs. William Cutbush and Sons, Highgate, N.

Cattleya Brenda.—A very taking Cattleya with a beautiful fimbriated lip. The petals are nicely waved, and rosy pink is the dominating colour. Parentage: *C. Dusseldorfii* × *C. gaschelliana*. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Odontoglossum Vulcan crawshayanum.—A really charming variety with reddish brown flowers varred and tipped lemon yellow. The flower-spike was very strong and carried eleven fine flowers. Parentage: *Odontoglossum crispum* × *Odontioda Huylstekei*. Shown by de B. Crawshay, Esq.

Calanthe Bruno Schroder albiflora.—A much-improved variety with larger flowers than the type. Shown by Baron Bruno Schröder.

NEW FRUIT.

Apple Oatlands Seedling.—A good late dessert variety of medium size and coloured on the sunny side. It partakes of the flavour of Cox's Orange Pippin. The flesh is firm and juicy. Parentage: Cox's Orange Pippin × Sturmer Pippin. Shown by Mr. F. G. Gerrish, Pendley Manor Gardens, Tring.

HARDY PERENNIALS FROM SEEDS.

JUDGED by the frequent enquiries which come to hand, there would appear to be to-day a far greater desire than formerly to raise the best hardy perennials from seeds. At no time in the history of hardy plant gardening have seedsmen in general paid so much attention to this particular branch, and not only are the best-known seed-houses affording increased facilities to purchasers, but new sources of supply are opening up on every hand. This is but the natural outcome of an increased demand, the amateur having realised somewhat of the wealth of beauty and variety such gardening affords. Hence the raising of perennial plants from seeds is calculated to be far

more popular in the future than it has been in the past, and where permanent beds or groups are the object in view, nothing can surpass the system we have in mind. A single plant of this or that may cost sixpence, or even twice that sum, while a packet of seeds, even if of equal cost, which is only rarely the case, may yield two or even three dozen plants. To take, for example, so useful a subject as the long-spurred hybrid Columbines, than which no flowering perennial has a more elegant or distinctive grace, we see at once the value of dozens of plants in beds or borders, a value which is only equalled by the utility of the flowers in the decoration of the home or their importance in the exhibition arena. Moreover, the plant so raised, if grown in well-cultivated soil, will give of its best for years, a "best" whose productiveness is increased in proportion to the care and intelligence bestowed in its cultivation.

In like manner the Gaillardia, Hollyhock, Larkspur and Coreopsis, among many others, are each amenable to similar treatment, and alike valuable from the decorative point of view. What is most necessary to impress upon the amateur or beginner in gardening who undertakes such work is the need of starting in season and in reason, and of possessing his soul in patience until such times as a first flowering is secured. That energetic individual should remember, too, that a plant of perennial duration does not often attain to the flowering stage in the first year, and that, should a flowering ensue, it should not be regarded as characteristic of the flower or representative of the group to which it belongs. It is quite true, however, that seeds of the perennial Larkspur, among others, may be sown in gentle warmth in January and February, and pushed along with all speed and planted out in May in deeply and richly cultivated soils to give a flowering during the late summer or early autumn ensuing. The fact is interesting rather as the result of intensive cultivation, though it is not general or reliable in all seasons or localities alike.

At the most, then, such flowering in a perennial should be regarded as precocious, the seedling being none other than the child of the parent plant. There is, however, a distinctive gain to the plant thus early set in its permanent home, for by the ample scope afforded for development it will have garnered to itself a strength of crown and rootstock immeasurably superior to that of the seedling which has been permitted to dawdle away its earliest days or weeks minus the attention so requisite to its needs. The moral, therefore, will be obvious to all.

In conjunction with early sowing there must of necessity follow timely transplanting, and if in due season the plant be got into its permanent abode, the cultivator will at least have the satisfaction of knowing that he has played his part. Such work, indeed, is fundamental, an essential that cannot be ignored with impunity. The most successful cultivators or exhibitors of this or any other time are the greatest sticklers for cultural details, and, apart from their mastery of these, they adopt the inexorable rule of never putting off till to-morrow work that should have been done to-day. Naturally, the amateur will say, "How impossible for me to emulate this clockwork precision and regularity," and this, indeed, may be true. At the same time, it might conceivably be his ambition, a goal he is ever endeavouring to reach. This and the ever-present knowledge of the importance of doing the right thing at the right moment will, if he be a true flower-lover, spur him on to further effort in the direction indicated.

To say that seeds of all perennials should be thinly sown and, so far as under glass cultivation is concerned, lightly covered is but to repeat what has been said hundreds of times before. Seeds of the Larkspur, for example, are large enough to admit of handling singly, and where this is not the case, a thin distribution of them is very important. Light-weight seeds, as Statice, certain species of Anemone and Gaillardia, may be covered more deeply than seeds of the weight and character of the Columbines or Lychnises, while seeds of the largest size, as Pæony, perennial Pea, Iris, or others like Phlox, Christmas Rose, Adonis or Hepatica, which remain for a couple of years without signs of vegetating, may be covered fully half an inch deep and will be further benefited by a protective board or slate covering meanwhile, in order to stay evaporation and prevent the undue souring of the soil.

On the other hand, seeds of a minute character will require but little, if any, soil covering, and these are they that test the skill of the seedling-raiser most of all. For all such the most careful watering is necessary; better, indeed, that watering as usually understood be dispensed with and that the seed-pot be partly immersed in water for a few minutes now and again in lieu. Not a few species and varieties of Campanula appear to dislike a deep soil covering, and the finest of sandy soils only should be used. Soils, too, for seed-sowing should be free of manure, and are best if baked or heated to an extent calculated to destroy all insect-life. Above all, the amateur should remember that there is no necessity to empty the entire contents of a packet of seeds in a single pot. Far better that a part be sown and the remainder reserved for sowing in the open ground in favourable weather in March.

The following are some of the more important groups easily raised from seeds: Achillea, Aster, Anchusa, Anemone, Aquilegia, Aubrietia, Campanula, Chelone, Coreopsis, Coronilla, Delphinium, Dracocephalum, Echinops, Eryngium, Gaillardia, Galega, Geum, Heuchera, Iberis, Chrysanthemum, Leucanthemum, Monarda, Lupine, Lychnis, Polemonium, Scabiosa, Papaver, Primula, Pentstemon, Silene, Statice and Zauschneria, and there are many others.

E. H. JENKINS.

CLIMBING ANNUALS FOR ARCHES.

MANY amateur gardeners make up their minds to erect light arches over paths and in other places in the spring, so that they can train the shoots of annual climbers over them. The plants are easily raised from seeds, and look very charming when in full blossom on the arches. Some of the half-hardy annuals, if carefully prepared, are splendid for the purpose.

I will not deal with each kind in detail, as it would take up too much space, but will give a few hints on the raising of both the half-hardy and the hardy kinds. Seeds of the former must be sown early in March—during the first half of the month—either in pots or boxes. I favour pots, because most of the plants are deep-rooting, and in pots they have more space. Use a compost of the following: Loam, two parts; leaf-soil, one part; and sand, one part. The seed-vessels may be placed in a cool or moderately-heated greenhouse,

or on a hotbed in a frame. The pots may be covered with squares of glass, but not with paper or moss in addition. Nothing must be done to weaken the seedlings, and the glass should be removed as soon as the seedlings are up. Admit air also when the weather is mild. Transplant the seedlings in pots, not shallow boxes, and then transfer them singly to small pots, from which they may be turned out and planted in their flowering quarters.

The hardy kinds should be sown at the end of March, or not later than the first week in April, if the plants are to be raised in cool frames or in pots. Those raised in their flowering quarters need not be dealt with until the middle of April, as care must be taken not to give them a check, and in cold soil they would receive this. As regards compost and potting, treat the hardy kinds as advised in the case of the half-hardy sorts. Some good loam and a quantity of rotted manure must be put in the positions where the plants are to grow and flower, except in the case of the *Nasturtiums*, and these will do quite well in ordinary unmanured garden soil.

Half-hardy kinds: *Ipomœa coccinea*, *I. hederacea* *superba*, *I. Quamoclit*, *Mina lobata*, *Scyphanthus elegans*, *Thunbergia alata*, *T. alba*, *T. aurantiaca* and *T. coccinea*.

Hardy kinds: Sweet Peas, of course, may be largely grown, and seeds or plants of these should be put in any time in spring in pots or in the open border where the plants are to flower; *Nasturtiums*, mixed colours; *Humulus japonica* and *H. j. variegata*, and *Convolvulus* (*Morning Glory*), mixed.

AVON.

GREENHOUSE FLOWERS FROM SEEDS.

A GREAT many of the flowering plants that we depend upon for the embellishment of the greenhouse or conservatory are raised from seeds sown at some season or other. Well-known examples of these are *Primulas*, *Cinerarias*, *Cyclamen*, *Calceolarias*, *Begonias*, and *Streptocarpus*. It is, however, not my intention to deal further with these, as articles about them have already appeared in *THE GARDEN* this year, but rather to refer to the many different subjects, mostly plants of annual duration, of which seed may be sown now and the resultant plants will yield a display in the greenhouse during the forthcoming summer and autumn. Most of them will grow out of doors during the summer, but they are on that account none the less valuable for greenhouse decoration. Among the best are

Asters.—These are more commonly regarded as subjects for the furnishing of outdoor beds during the summer than for greenhouse decoration. Still, they are exceedingly useful for this purpose, and keep up a good display over a lengthened period.

Alonsoa Warscewiczii compacta.—This does remarkably well in pots, and produces its bright red flowers in great profusion.

Balsams.—These were great favourites with our forefathers, and now, after being under a cloud for many years, show signs of a return to popularity. The main essential in the successful culture of Balsams is to take care that the plants are never allowed to get stunted during their earlier stages. Some of the perennial species do well when treated

as annuals, notably the vermillion-coloured *Impatiens Holstii* and the carmine rose tinted *I. Sultanii*.

Browallia elata.—A pretty free-flowering annual, about a foot high, whose flowers are bright blue with a white centre.

Celosia pyramidalis.—The plumose flowers of this plant are remarkable for their vivid colours. It is well known both for flower garden and indoor decoration, and its relative the Cockscomb always attracts attention, particularly in the greenhouse, where its distinctive features are brought close to the eye.

Clarkias.—Of late years Clarkias have become more popular than ever, and their value for pot culture has been well exemplified during the last two or three Temple Shows, where the improved forms of *Clarkia elegans*, namely, *Scarlet Beauty*, *Delicate Pink* and *Firefly*, have formed quite a notable feature of Messrs. Sutton's exhibit. The orange-coloured, Daisy-like flowers of this comparatively new plant are always admired, whether indoors or out.

Godetias.—If grown in pots, given frequent doses of liquid manure and care is taken to keep the seed-pods picked off as they form, the Godetias are a very valuable race of plants for this purpose, their flowering season being spread over a lengthened period.

Lobelia tenuior.—This striking Lobelia has of late years become quite a favourite for pot culture, under which conditions it is remarkably showy. It is also a first-rate basket plant.

Mignonette.—The delicious fragrance of the blossoms is pleasing to everyone, for which reason Mignonette is appreciated at all seasons of the year.

Nemesia.—Very few annuals have made such rapid headway in popular favour as these, the flowers being bright and effective and the colours varied. The merits of the dwarf forms *Blue Gem* and *White Gem* must on no account be passed over.

Nicotiana.—The different *Nicotiana* hybrids are exceedingly valuable for greenhouse decoration, especially those with flowers of a clear decided tint.

Petunias.—These are not annuals, but seed sown in the spring will yield plants that will flower throughout the greater part of the summer and well on into the autumn.

Rhodanthe Manglesii.—Both the white and rose varieties of this are among the finest of everlasting flowers, as if they are cut before they fully expand and are hung up to dry, they will keep during the winter.

Schizanthus.—The very fine specimens of these that one often meets with are from seed sown in the autumn, but seed sown now will give flowering examples for the latter part of the summer.

Statice Suworowii.—The pretty pink flowers of this *Statice*, disposed in strange-looking spikes, appeal not only for their beauty, but also for their novel appearance.

Stocks.—These are general favourites, and, like Mignonette, their fragrance appeals to everyone.

Thunbergia alata.—A pretty trailer with trumpet-shaped flowers of a buff colour with a dark eye. In *aurantiaca* the blossoms are bright orange.

Torenia.—These are exceedingly pretty greenhouse annuals, more delicate in constitution than most of those above enumerated. In *Torenia Fournieri* the flowers are purple and white, and in *T. Baillonii* they are yellow and purple.

Seeds of all these flowers should be sown very thinly in well-drained pots 5 inches to 7 inches in diameter. Use good soil composed of loam two parts, leaf-soil and decayed manure half part each, with a dash of coarse sand. From three to five seedlings will be sufficient to have in each pot, and it is essential that they be grown in quite a cool greenhouse or frame and be kept near the glass.

H. P.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make *THE GARDEN* helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only and addressed to the EDITOR of *THE GARDEN*, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET PEA CLUMPS (*Burton*).—We should allow 5 feet from centre to centre of the clumps as a minimum, and if we could afford the space to give 1 foot more, we should do so.

LAYING OUT A GARDEN (*Miss F. C.*).—Between your proposed house and your bush Plums we should advise you to make a lawn with, if there is room, a Rose bed or beds in the angle formed by the house. We should move the two bush Plums and form the rock and water garden on each side of the entrance to the fruit garden having rock and water garden combined. Along the line of the hedge separating your orchard from the pleasure garden we would suggest a shrubbery about eight feet wide, planting it with such subjects as *Forsythia suspensa*, *Spiraea arguta*, *S. canescens*, *S. japonica* variety *Anthony Waterer*, *Daphne Mezereum*, *Hamamelis mollis*, *H. arborea*, *Lilacs Marie Legraye*, *alba grandiflora*, *Charles X.*, and *Souvenir de L. Spath*, *Ribes sanguineum*, *Philadelphus Lemoinei*, *P. coronarius*, *Diervilla Eva Rathke*, *D. Abot Carrière*, *Viburnum plicatum*, *Eleagnus pungens* variety *Simonii*, *Ligustrum japonicum*, *Berberis stenophylla*, *B. Darwinii*, *Hypericum hookerianum*, *H. moserianum* and *Magnolia stellata*. Here and there trees such as *Prunus serrulata* *James H. Veitch*, *P. Avium* fl.-pl., *Almond*, double-flowered *Peach* and *Laburnum alpinum* might be introduced. Between the gate and the house we recommend Rose-beds, and along the fence a few small growing trees, such as double-flowered *Thorns* and *Laburnums*. If there is room along the boarded fence, it would be a good plan to repeat the shrubbery on account of shelter.

REMOVING VARIOUS PLANTS (*K. A. W.*).—April is a very late time to transplant Roses. We should prefer to move them at once and plant them temporarily on a vacant piece of ground until next autumn. Another plan would be to pot them now and replant as soon as your new garden is ready. In either case we should recommend you to leave the pruning as late as possible, say the end of March; then the buds near the bottom of the stems will be dormant until early April. Nothing would be gained by lifting the plants now and laying them in until April. A south or south-west aspect would suit Hybrid Teas very well. You may plant Lilies of the Valley deep enough to allow of from 1 inch to 2 inches of soil being placed over the crowns. You may safely transplant your *Magnolia grandiflora* in April, providing you exercise care over the operation. Tie the branches together; then make a trench about the roots, fork the soil away carefully from the outer roots, undermine the ball, and lift the plant by means of forks placed below the ball on to a mat. Stitch the mat tightly about the roots and remove the plant to the new position with as little delay as possible. Prepare the hole, then lift the plant carefully in, spread the roots out to their full extent and fill in among them with a mixture of sandy loam and peat. Water well and keep the leaves syringed for a few weeks. *Madonna Lilies* will be likely to suffer severely if transplanted in April. You might manage to move them during the first week in March if you can lift them carefully in clumps so as to keep the majority of the root whole; then replant them as soon as possible in their new position. Another plan would be to arrange to leave the bulbs for the summer and have a supply sent you in early autumn.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Glory of the Snow.—The prettiest member of the Chionodoxa family is, we think, the little gem known as *C. sardensis*, which is considered by some to be a variety of *C. Luciliae*. The intense blue of its flowers, which is surpassed only by that of the Gentian, is more than welcome at this season, and contrasts well with the paler colour of *C. Luciliae*, which is, of course, much better known. Not the least interesting feature of *C. sardensis* is its cinnamon red flower-stems. It is easily cultivated, and multiplies freely by means of seeds.

Wistaria chinensis for Forcing.—Few shrubs better repay the care and attention of those who are responsible for keeping a greenhouse gay with flowers during early spring than this well-known climbing plant, for it forces easily, gives little trouble, may be used for several successive years without rest, and can be relied on to bloom freely. To succeed with it, however, it is necessary to rely strictly upon pot culture, and so induce sturdy, stunted growth in the nature of spurs, rather than the long, trailing branches peculiar to the species when growing freely, for the maximum number of inflorescences can only be obtained from short-jointed, stunted wood; moreover, plants with long, trailing branches would be less suitable for indoor work. Placed in well-drained pots 8 inches or 10 inches across, in really good loamy soil, they will go on with feeding for five or six years; then, if necessary, a year in the nursery prepares them for a further period; in some cases, however, repotting suffices. The long racemes of fragrant lilac flowers are popular with everyone, and arranged with green foliage plants a simple and charming effect is produced.

Two Early-flowering Plums.—*Prunus cerasifera* and the Japanese *P. triflora* are the two earliest of the Plums to blossom, *P. cerasifera* being a few days the earlier this year, although such is not always the case. *P. cerasifera* is an old garden tree, although really fine specimens are not very common. Some doubt exists as to its natural habitat, though it is considered to be the region of the Caucasus. It is, however, common throughout Southern Europe, and is grown in quantity in France for the sake of its red Cherry-like fruits, which are imported into this country in July under the name of Cherry-Plums. Crops of fruit are sometimes matured in English gardens, though, possibly on account of early flowering, no regular crop can be expected, and the trees are grown solely for the decorative effect of their white flowers, which appear with the greatest freedom. The best position for this tree is in a place where it can have a background of evergreen foliage, for the effect of the blossoms is lost when the trees are growing in the open ground. In addition

to the type, the purple-leaved variety is also effective at this period, while the closely-allied *P. divaricata* is rarely more than a week or ten days later. The latter tree, though in many ways similar, bears yellow fruits. *P. cerasifera* was in full flower during the last days of February. Usually it is two or three weeks later.

Artemisia lactiflora.—This is a strong-growing perennial, reaching from 4 feet to 6 feet high if given a somewhat moist position. Although this is not absolutely necessary, a dry border must be avoided, or the full beauty of the plant cannot be realised. The lobed foliage is very elegant, and the terminal panicles of milk white flowers make a pleasing contrast among other occupants of the herbaceous border. It is now fairly plentiful, and should prove a valuable plant for all gardens; while if space could be provided, a large batch ought to be cultivated, for under such conditions it is seen at its best.

Primula malacoides.—One of the present-day signs—it is unmistakable and invariable—of an approaching popularity in the case of any plant that promises to be general or universal is that it be the subject of specialisation by market-men, and this is exactly what is taking place with the above-named delightful *Primula*. Free and easy of growth, abundant and profuse in its flowering and seeding, and of that delightful lilac mauve tone which is sure to please the ladies, it is small wonder that this comparatively recent novelty has so quickly caught on, and just as quickly found its way from market nursery to West End drawing-rooms through the usual channels of market and florists' shops.

Bamboos for House Decoration.—Private growers might well follow the example of those who have frequently to supply plants of various kinds for the decoration of the interior of municipal and other public buildings, and grow a considerable number of Bamboos for the purpose. They are easily cultivated, and stand well for some time in the house if attended to with water. They are specially valuable for corridors and halls, where their handsome foliage looks cool and pleasant. They also form charming backgrounds to flowering plants. They are largely employed, for example, in Glasgow, where a great number of municipal functions take place, and where the Bamboos come in very well either grown in pots or in tubs. They give little trouble after being used, and can be cultivated in the winter gardens or other glass structures suited to plants such as this, which does not require heat. Without distinguishing between the true Bamboos and the Arundinarias and other genera so closely allied, one may say that *Bambusa Metake*, *Henonis*, *palmata*, *nigra*, *aurea* and *flexuosa* may all be named as good for the purpose and as affording a satisfactory variety.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Daffodil pallidus præcox.—I do wish this dear little Daffodil had a more pleasing name. I planted some last autumn in my front garden, and one morning last week was rewarded by hearing a little child's voice exclaiming in a tone of rapture (which would have gone to the heart of the Rev. J. Jacob), "Oh, look! Daffodils!" A cruel elder answered, "Them ain't Daffs; Daffs is yaller." But the child bravely persisted, "They *are* Daffodils, and they're a sort o' yaller," and then was dragged away, still, Galileo-like, protesting in an undertone, "They *are* Daffodils."—A. M.

Annual Larkspurs.—Can anyone tell me where I can get seed of the old-fashioned, tall, single-flowered Larkspurs? I have tried vainly for some years past to do so, but can only obtain the clumsy, stodgy, shapeless Stock or Hyacinth varieties in vogue nowadays. I sigh in vain for the "airy fairy" flowers which have apparently vanished from our gardens. Perhaps they have flown away, frightened by the florists' monstrosities referred to? In childhood I always feigned the fancy that their flowers had just perched lightly on the branches, and in that lightness consisted their especial charm.—AN AMATEUR.

Hardy Azaleas.—I was much interested in the article on these plants by "A. O.," page 93, issue February 24. Some years ago I visited a garden in the New Forest, and was much surprised to see the scores of hardy Azaleas growing in the borders on both sides of the long, winding carriage drive, and also in beds by themselves. I have never seen specimens grown in pots look better than these did. Many were models as regards form, and were 5 feet and more in diameter. The soil was mainly loam and gravel, and so peat and leaf-soil were added. Since that time I have taken considerable interest in the growing of hardy Azaleas in the open border, and I daresay more are so cultivated in Hampshire, and especially in the New Forest district, than in other counties. If they are extensively grown in other counties, I should, with many more readers, be pleased to learn something respecting the cultivation. Certainly in the district to which I refer the soil is, generally, very suitable.—B.

The Hoop-Petticoat Daffodil.—Mr. Reginald A. Malby has done a good service in praising so highly the little Hoop-Petticoat Daffodil on page 94 of the issue for February 24, but it would be useful were more of your readers to detail their experience with it as an established plant in the garden. One little bit of advice is worth giving, and that is that anyone who has really succeeded in establishing it should be cautious about disturbing the plants. I know one garden where it was established in plenty, had also seeded, and the seedlings had come into flower. The border was, however, in need of renovation, and the little Hoop-Petticoats were lifted and replanted. They never did any good again, and they are truly missed in the garden. In another garden well known to the writer this charming little flower had also become established in a low rockery. This was taken down and reconstructed, the Daffodils being restored to their former position, but in fresh soil. They also failed. Why this happened nobody can well say, but the lesson is an obvious one. The sulphur-coloured one, *citrina*, as it is often called, is as

good as any for its apparent willingness to establish itself.—S. A.

Green-Leaved Aucubas.—Your note on this plant in the issue of February 24, page 89, is timely. In certain positions where there is nearly always a cold draught, and very often keen, cutting winds, various kinds of shrubs have failed to live; but the green-leaved Aucuba did well and without, as it were, turning a leaf. For many years I have noticed some plants growing in tubs in positions where the light is not good even in summer-time, and they have done remarkably well. These are undoubtedly grand shrubs for town gardens. They are wonderfully free-rooting and like a rather stiff loam.—SHAMROCK.

The Laburnums.—I heartily endorse the remarks on the Laburnums made on page 97 in the issue of February 24. There are few kinds of flowering trees that bear more blossoms or continue to do so as consistently year after year. I have seen trees growing in small gardens for nearly twenty years, and they did not increase in size much during that period, but the blossom appeared in profusion every year. The soil was poor. Laburnums do very well under larger trees, and they certainly look charming in such positions. For growing in town and suburban gardens they are among the best.—AVON.

The Lapageria in the Open.—I have grown this for some years in the open, but I differ from some of your correspondents as to the best position for it. I find it impatient to hot summer sun, and that it does better if planted on a north wall. I have it in such a position here, and both varieties, rosea and alba, were in good flower during the first week in January in this situation. It should, of course, be planted in peat, and as slugs are much addicted to it, it is better for a tin collar to be placed round the base. I give it a light sprinkling of straw over the roots during very frosty weather, but no other protection.—L. HARCOURT, Nuneham Park, Oxford.

Gold-Laced Polyanthus Wanted.—There is a revival in Lancashire in the cultivation of these flowers, and many good seedlings have been raised of late years. It is, however, a very sad fact that many old and good varieties are now extinct, so far as the growers who exhibit are concerned. As some of the old varieties were better than anything now existing, and as some of them may still be grown in gardens that one knows not of, I ask your readers to let me know if they can give any information as to the existence of Bullock's Lancer, Cox's Prince Regent, Maud's Beauty of England, Hufton's Lord Lincoln, Addis' Kingfisher, or any other old named variety. The old varieties that we still have are Saunders' Cheshire Favourite, Crownshaw's Exile, Buck's George IV. and Sir Sydney Smith. I have been emboldened to make this enquiry because recently a florist brought me a bloom of Nicholson's King, an old-time flower the existence of which at the present time I had no knowledge of. Other old flowers may be surviving somewhere, and any genuine information about them will be gladly received. I use the word "genuine" advisedly, as a certain enthusiastic florist friend of mine was, a few years ago, supplied with common Cowslips and Primroses from an enterprising floricultural fraud. There is nothing more beautiful than Cowslips and Primroses; but even the most ardent florist feels disappointed when they appear instead of the rare, if not extinct, Bullock's Lancer.—JAMES W. BENTLEY, Stakehill, Castleton, Manchester.

Gaillardias.—The coloured plate of some of the varieties of these hardy flowers now in commerce published with THE GARDEN for March 2 should help to draw attention to them as furnishing brilliant colour-effects in gardens and as growing capital flowers for cutting and bunching. The varieties pictured are but a few out of so many now named, most of which can be reproduced from sowing a packet of mixed seed of the grandiflora section either in the open or in shallow pans in a frame, raising strong plants to put out where they are to flower in September. Gaillardias, because of the glowing yellow, red and crimson hues of the flowers, do not harmonise well with many other flowers; indeed, they seem best suited for planting in a huge bed solely, or to form a front to a long border which behind is planted with shrubs. Impatient of being tied up to stakes, the plants, if they have a free fall, do better if allowed to grow free and unrestrained. Then they give a great wealth of colour.—D.

Pure White Snowdrops.—One wonders what would have been said of the white Snowdrops by the poet who wrote: "Could you understand one who was wild as if he had found a mine of golden guineas, when he noticed first the soft green streaks in a Snowdrop's inner leaves." Probably he would have scorned them as abnormal flowers or monstrosities of Nature. Yet they have some beauty, and the Snowdrop fancier delights in their flowers. In these white Snowdrops the green markings, both on the exterior and interior of the inner segments, are absent, and the flowers are entirely white. The first of these to be found is one called *poculiformis*, which is not only devoid of the green markings, but has also the inner segments, or "tubes," as some call them, as long or nearly as long, as the outer ones. This gives the flower a very attractive appearance. It is, unfortunately, a weak grower. Another one, called *Galanthus nivalis albus*, is not so pleasing, and shows a greater tendency to throw flowers with a few green markings. These forms have appeared in several places, and I received one resembling *poculiformis*, but with additional segments, from an old Scottish garden some years ago.—S. ARNOTT.

Soaking Sweet Peas.—I do not propose to follow Mr. H. J. Wright in making a selection of six of the best novelties in Sweet Peas. It is rather chasing a chimera, and if fifty critics sent selections, what a confusion would be found. But this matter of the use or non-use of soaking Sweet Pea seeds to soften the husk before sowing to facilitate germination is of practical importance. If it is of no use to saturate Peas in water prior to sowing to soften the skins, what causes operate in the soil, if it be not moisture, to cause the skins to soften and thus enable germination to take place? Does the soaking in water for a few hours fail to produce that germinative action which burying in comparatively cold soil does? If skins of seeds are, when soaked, impervious to the action of water, how comes it that they are fully susceptible to the action of moisture in the soil? Or is it that water alone exercises no influence, but that water in conjunction with soil does? If that is so, has anyone tried burying Sweet Pea seeds in damp sand in a box or a flower-pot for twenty-four hours, then running them through a fine sieve and sowing the seeds? If Mr. Wright's theory is a correct one, then it is difficult to understand why burying in moist, cold soil should enable moisture to do to the seeds what tepid water will not do out of the soil.—CRITIC.

Pruning Climbing Roses.—On page 91 "A. P." says "the proper time to do this is the late summer." I contend it can be equally well, or better, done at the present time. As to cutting out the rods entirely after *once* flowering, I can assure "A. P." it is a very wasteful practice, as all strong rods of such varieties as Crimson Rambler, Blush Rambler and many others, if after flowering they are spurred in to one or two buds of the base the following February, will flower profusely; in fact, if the young rods are not fully ripened, I would prefer the year old rods. If, on the other hand, the young rods are ripe, retain them their whole length by all means. As to the Hybrid Perpetuals, "A. P." does not mention the necessity for cutting out weak and exhausted wood, irrespective of its position, which is of more importance than the length allowed for the shoots retained; that will depend upon the variety and purpose for which it is grown. I am well aware the fashion now is to prune the climbers in late summer; and if the climbers, why not all? I have seen examples of this summer pruning the following spring, and if it is very mild all goes well; but if not, the summer pruning forces the buds to start earlier, and consequently they are more liable to be damaged by late frost. I have practised February pruning for some years with success.—H. SMITH.

Bitter-Pit in Apples.—In the issue of THE GARDEN for December 2, 1911, I notice some observations by "Scientist" on bitter-pit in Apples, and as I am investigating this particular disease at present, I would be pleased to have further information on one or two points. 1. He observes that the disease was extremely prevalent during the past year, and since the past summer in England was exceptionally hot and dry, it would be interesting to know the rainfall during the maturing of the fruit in the orchard where the fruit of Tower of Glamis that was illustrated was grown. Generally with us the disease is worst when the weather is intermittent, when there is a dry spell followed by heavy showers, and it would be instructive to learn what rain occurred during the ripening of the Apple and when it fell. 2. In *Nature* for June 1 there is a note from F. C. Constable concerning the theory that the retardation of the flow of sap tends to the production of fruit as against wood buds. He observes that in 1910 the want of sunlight tended to weaken the vitality of trees, and so tended to retard the flow of sap. He asks, "Should we not, then, expect this year (1911) to find an *excess* of fruit-buds?" and adds, "The show of Apple blossom round us, in Gloucestershire, is exceptionally profuse." Since there was an excess of sunlight last summer, it would be interesting to know what effect it is having, or will have, on the development of fruit-buds. Perhaps you or some of your readers could give the desired information and so oblige—D. M'ALPINE, *Department of Agriculture, Victoria, Australia.*

Galanthus Imperati.—If there is one kind of Snowdrop which deserves extended cultivation more than any other, then surely it is *Galanthus Imperati*. A native of Italy, its real charm lies chiefly in its vigour and size of flower, making it a glorified form of the common Snowdrop. Like many others, this Snowdrop is variable. All of the variations are lovely, but it is a difficult matter to place one's finger on the exact spot where *Galanthus Imperati* ends and the common Snowdrop, *G. nivalis*, commences. For this reason the former is often regarded as a variety of the latter. The outer segments of the flowers of *G. Imperati* should finish abruptly and taper to the base. The inner segments are spotted green; this is very conspicuous on a sunny day when the flowers are fully expanded. It is the most stately of

THE ROSE GARDEN.

WHY WE PLANT ROSES IN SPRING.

WHAT a vast change has come over the Rose world this last fifty years! Prior to that time one would have scarcely dreamed of planting a Tea Rose until all danger of spring frosts was over, and then the plants had to be pot-grown, for nurserymen never thought of budding Tea Roses outdoors. But now we have a glorious race of Hybrid Teas that seem to lend themselves to any mode of treatment.

If it is necessary to defer planting until spring, they are as successfully planted at that time as in the autumn; in fact, I would prefer spring to autumn for the beautiful decorative Roses used for bedding or massing. The Briar, upon which most of our modern bush Roses are budded, really takes to the soil more readily when the land begins to feel the effect of the spring sunshine than it does during the cold, wet autumn season. One has only to observe how the Briar stocks succeed in Rose nurseries as verification of this fact, for no Rose-grower would think of planting his seedling or cutting Briar stocks until February and March; but by July they are a veritable tangle of growth.

The only disadvantage against spring planting is that one may not be able to obtain plants quite so strong as in the autumn; but even that difficulty is being overcome, as Rose nurserymen hold back large stocks of plants for the spring business, and they are kept dormant by frequently removing them from the soil and heeling them in again. This retarding is very essential to real success in spring planting. Obviously, if one lifts a plant already started into new growth, it will receive a great check; but this is prevented by planting dormant bushes.

I know many amateurs defer planting Roses until spring, thinking that they are safe against injury by winter frosts, and that if there is to be any loss it will fall on the nurseryman. I am afraid this last autumn many would-be planters were prevented from doing so owing to the great rainfall. The soil was

prepared, but the incessant wet made it impossible to plant in anything like favourable conditions. Even if the plants were purchased, they would have been better heeled in the soil in some out-of-the-way spot than set out when the soil was wet and very sticky. Such precautions would well repay anyone, because it is courting failure to plant at such a time, unless a good supply of prepared compost were at hand to put on to the roots.

Four Essential Points to remember when planting in spring are: (1) To deeply cultivate the soil; (2) to procure good, sound, dormant plants; (3) to hard prune at the time of planting; (4) to well tread the soil at the time of planting,



A BEAUTIFUL SNOWDROP: GALANTHUS IMPERATI.

Snowdrops, growing from 6 inches to 12 inches high and is by no means particular about soil. When once planted this modest flower may safely be relied upon to take care of itself. There are many named varieties, of which the finest is *G. Imperati Atkinsi*.—S. P. N.

FORTHCOMING EVENTS.

March 11.—United Horticultural Benefit and Provident Society's Annual Meeting, 8 p.m.

March 13.—East Anglian Horticultural Club Meeting.

March 14.—North of England Horticultural Society's Show at Bradford.

and again about two weeks hence. If for any reason the soil cannot be dug more than 18 inches deep, I would suggest adding another 6 inches of good soil to the surface, and thus forming a sort of raised bed. Let this added soil be good, well enriched with good manure, and the whole incorporated with the staple soil. Manure should be liberally supplied also to the lower soil, so that there is a supply of good food when later on in the summer the roots find their way into it. A handful of bone-flour should also be given to each plant just before placing the final soil on to its roots.

As regards the third point, all ordinary Roses should be cut back as soon as planted to about five inches, and, finally, at the beginning of April to about three inches. This looks terribly drastic, but it pays. Strong growers of the Hugh Dickson type may be retained 2 feet in length now, and finally reduced to about eight inches or ten inches. Standards may be treated on the same lines, and

numbers last April and treated them as I have here attempted to describe, and they were a glorious success. Some of the plants were even planted in the early days of May, although I do not advise deferring the work until then. But when there is no opportunity to plant before May, then, of course, one must resort to the more expensive method of setting out pot-grown Roses, and this is rarely satisfactory unless one is prepared to pay high prices for extra-sized plants. P.

THE ROCK AND WATER GARDEN.

A BEAUTIFUL PLANT FOR A DRY WALL.

(ANDROSACE LANUGINOSA.)

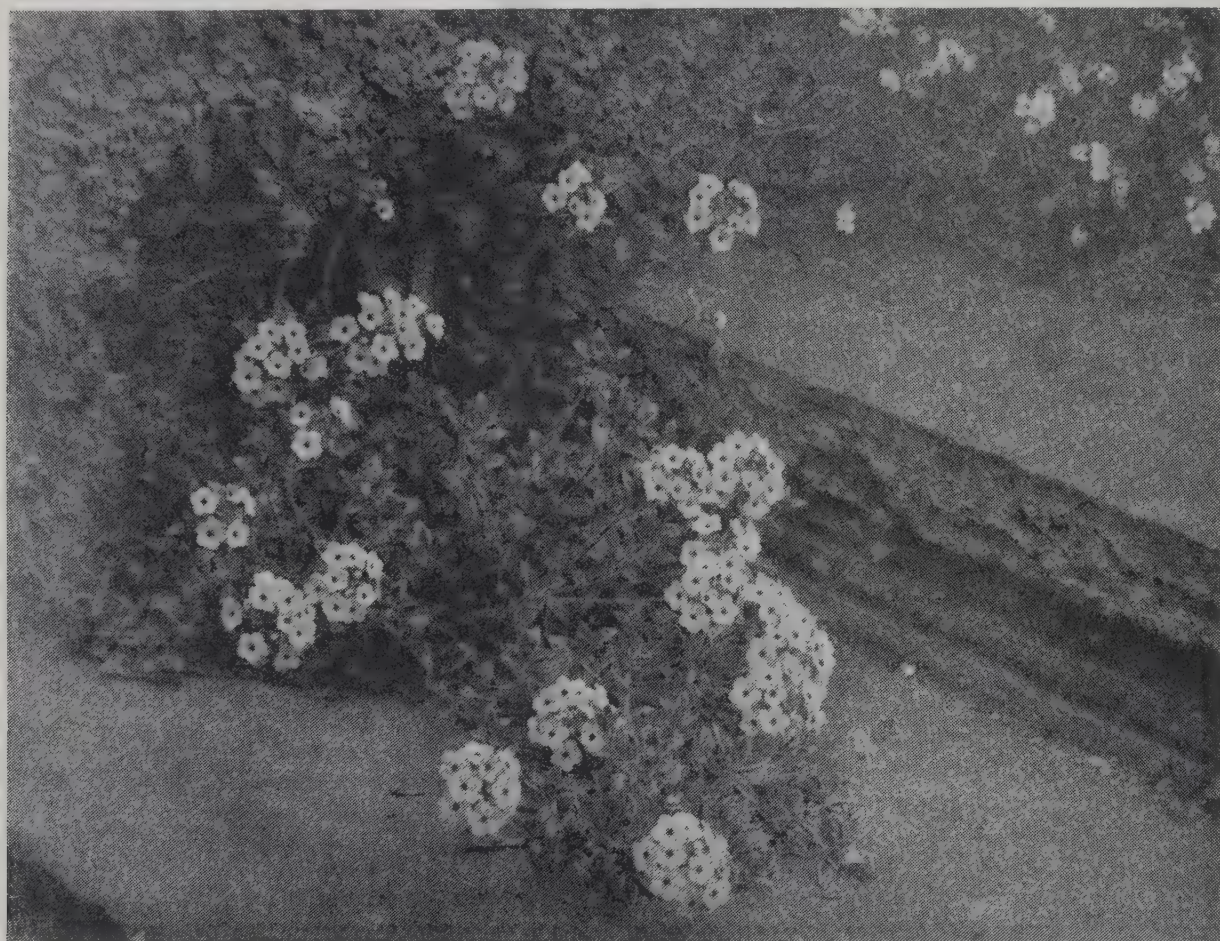
THE Himalayan *Androsace lanuginosa* is one of the loveliest members of a genus remarkable for

One of the happiest instances of success I have had with this fine plant is as a subject for a sunny dry wall, or, as seen in the illustration, where it protrudes from a wide joint in the steps leading to the garden. Such positions favour the development of alpine plants, which in more level planting frequently succumb to our moist climate in winter. Grown in a dry wall, *A. lanuginosa* is a reliable perennial, vigorous in growth, and gives the maximum season and quantity of blossom.

The genus belongs to the Primrose family, but the flowers of *Androsace* attain even a higher type of beauty than that found among *Primulas*. The flowers are borne in umbels upon very slender stems some six inches high, and are coloured a soft rose shade with a bright, deep-coloured eye. It begins flowering in June, attaining its maximum beauty in July, and generally throws a few flowers right up till October. It is readily propagated by cuttings taken during July or August and inserted in sandy soil, keeping them close for three or four weeks till rooted, when they are potted up and grown in an unheated frame ready for planting out the following spring.

Coombe Court Gardens.

THOMAS SMITH.



A CHARMING PLANT FOR STONE STEPS: *ANDROSACE LANUGINOSA*.

climbing Roses of the better class—that is, the large-flowered sorts—should be cut back to about three feet now, and finally to 2 feet. The Crimson Rambler tribe may be similarly treated, to their great advantage in the future; but the *wichuraiana* Roses may be left almost full length. These remarks specially apply to spring-planted Roses.

If the weather be dry throughout April, it would be a great help to the plants if they were given a good watering, taking care to hoe the soil over the next day. This should be repeated every week for about a month. In June very weak liquid manure may be given once a week, but keep off strong chemical manures. If care is taken in planting as advocated, there will be a grand show of bloom this summer, and repeated even more grandly in the autumn, providing the free-blooming decorative sorts are planted, with which our collection to-day is so very replete.

For the comfort of those readers who cannot even plant just yet, I may say I planted large

the great number of floral gems contained within it. While the majority of *Androsaces* are readily recognised by their small, rounded rosettes of silky grey-green leaves and runner-like growths, in the species under notice the intense silky grey of the leaves is most pronounced. Yet the habit of the plant is quite distinct, the stems being long, trailing and spreading, and the desire of every cultivator of *A. lanuginosa* is to possess a mass a yard wide tumbling in wild profusion over a sun-baked boulder.

It succeeds best in a sheltered, sunny spot on the rock garden, and enjoys a deep, well-drained bed of sandy loam and peat, freely mixed with sandstone chips. Under such conditions it makes rapid progress, and if ordinary precautions are taken to safeguard the plant from excessive moisture in winter, it may generally be grown to some considerable size, and therefore enjoyed for a number of years, as the plant is an evergreen perennial.

IN THE ROCK GARDEN.

THE little gems are fast beginning to peep up above the ground, especially in that section called the moraine. The soil requires to be renewed in a rock garden, as it becomes exhausted and worn out in the process of time. *Iris Histro* appeared in flower on January 2. Of course, the lovely *Iris stylosa* has been in flower in different parts of the garden from early in December, and has flowered well this season. *Narcissus minimus* was in flower on January 9. The little clump of *Cyclamen ibericum* (*Atkinsii*) has been charming this winter, better than I have ever seen the plants before. The *Snowdrops* are very gay, and the *Winter Aconite* is also prominent. *Crocus Sieberi* is a mass of colour every day on which the sun appears. This has pale violet flowers, and is a mountaineer. Everybody should grow this gem; it can be obtained for 6s. per hundred or 1s. per dozen. *Crocus Imperati* is also in flower. This has purple stripes on a bluish white, with a yellow throat, and always flowers in January if the weather is at all agreeable. *Rhododendron parvifolium* has been in flower since the middle of January. This makes a charming little dot plant. The *Hellebores* nestling near large stones have been, and are now, beautiful, especially so when protected with glass covers, when they are as clear as the stove *Eucharis*. Small plants of *Hamamelis mollis* and *zuccariniana* are very interesting with their spidery-looking flowers, which arrive while the twigs are yet bare, and these plants can be easily kept in bounds by pruning after the flowering stage is over. The pretty *Erica carnea* (red and white) are now finely in bloom, and clumps of these are very pretty at this season. *Nandina domestica* has had quantities of beautiful coral red berries, and has been a source of much attraction during the winter, as this is the first time such a wealth of berries has been seen. It is hardy here now, and has made quite good-sized bushes. It is a native of Japan, and in addition to the pretty berries it has very handsome foliage, with graceful metallic, Fern-like leaves. *Parrotia persica*, a shrub in the background, is now studded with blooms. This is a Persian tree. The leaves turn orange and crimson in the autumn, so it is really of special interest plant twice in the season.

Leonardslee.

W. A. COOK.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Brussels Sprouts.—In these we have the most important of all the green autumn, winter and spring vegetables, and no efforts must be spared to secure a succession of buttons of perfect quality. The plants demand a long season of growth; indeed, six months is not too much to allow from the time of sowing the seeds to commencing the use of the produce. In some gardens a sowing will already have been made; but in the majority of instances this month will be the popular time. A warm border where the soil is light should be chosen, if possible, for the seed-bed, and seeding must be thin to favour stocky growth from the start; to the same end thinning must be started in good time under the excellent rule that at no time shall the young plants touch each other. Occasional dustings with a mixture of equal parts of old soot and wood-ashes in the seed and nursery beds will be beneficial.

Broad Beans.—Towards the end of the month a good sowing should be made of some selected variety of Broad Windsor Bean, and it will probably be the last, as in many families these are not highly appreciated when there is an abundance of Green Peas at command. The seeds ought to be placed 3 inches asunder in trenches about the same depth and 4 inches to 10 inches wide, according as single lines or double lines of plants are preferred. When the seedlings come through, thinning should be done until the distance from plant to plant in the rows is not less than 5 inches, and if it is 6 inches the grower will not lose in any respect. It is imperative to the finest crops that the ground shall be in perfect mechanical condition and contain plenty of food.

Sowing and Planting Asparagus.—There is probably no one who does not immensely enjoy a dish of well-grown English Asparagus, though there are many among us who cannot spare the time to worry over the infinitesimal scrap of edible portion that one finds on the miniature scaffold-poles which are served as Asparagus at some hotels. The best is grown in one's own garden, and a start can be made from seeds, or plants may be purchased. In the former case the sowing ought to be done about the end of the third week of the present month, distributing the seeds thinly and evenly in drills from $1\frac{1}{2}$ inches to 2 inches in depth, the lines being 1 foot asunder. It is thus extremely easy to raise many plants, but a considerable period must necessarily elapse before the plants will yield any produce; in fact, it is three years before any cutting can be done, and four years before a really good crop is secured. By planting three year old crowns, cutting commences

in real earnest twelve months or so later. In all instances the soil should be deep and fertile; but except on close, heavy, cold land it is not essential to raise the beds above the normal level of the garden.

Succession Peas.—It is necessary to maintain an unbroken supply of excellent Peas, and to this end frequent sowings must be made. One or more lines, according to the demand, should be sown immediately, and further seeds got in at the end of the month. Still give the preference to a warm border, if such can be spared, and see that no efforts have been spared in the thorough preparation of



A LITTLE-KNOWN BUT BEAUTIFUL HARDY SHRUB: XANTHOCERAS SORBIFOLIA. (See page 122.)

the ground. A good depth of soil and plenty of available food are required to produce plants which will give heavy crops of Peas of the finest flavour, size and colour; and inferior stuff does not do nowadays.

Celery.—Many amateurs do not raise their own Celery; but unless an arrangement can be made to exchange other plants for Celery with a friend, it should always be done, because those which are purchased at barrows are apt to prove most disappointing. A few seeds sown now and a few more in April in pans of light soil in a frame will provide all the plants that will be wanted in the small garden.

H. J.

TREES AND SHRUBS.

SOME EASILY - GROWN HARDY FLOWERING SHRUBS.

(THE DIERVILLAS.)

THE various Diervillas, or Weigelas as they are more often called in gardens, form a showy group of shrubs which blossom towards the end of May and through June, although one or two kinds have a longer flowering period. Eight or nine hardy species may be obtained, but they are generally neglected for the sake of their more showy offspring, the majority of the kinds usually grown being hybrids or varieties. The species are widely distributed, for some are indigenous to North America, others are found in Japan, and contributions are made by the floras of China and Siberia. Diervillas are not difficult to manage, providing rich, loamy soil can be given; for although they grow in soil of inferior quality, the results are less satisfactory than when better material is provided. As they are gross feeders, it pays to give established plants a surface-dressing of well-rotted manure each spring. Regular pruning is not an absolute necessity, but more satisfactory results are obtained by thinning the bushes after flowering. This gives an opportunity for cutting out branches which appear to be weakening, thus keeping the centres of the plants open and giving encouragement to young wood. It must be borne in mind that the flowers appear from short axillary growths from the previous year's wood as a rule; therefore it is necessary to obtain plenty of young wood each year.

Propagation.—This offers no difficulties, providing cuttings are taken at the right time. Those inserted in a close and warm frame during late May or early June will root in ten or twelve days; but if cuttings are not taken until August, they will most likely take as many weeks to root, and will take longer to form serviceable plants. Cuttings rooted in June and planted in good nursery ground the same summer will, in eighteen months, have formed plants quite large enough for permanent planting. Old plants

which appear to be deteriorating ought to be destroyed and a fresh start made with young stock, for nothing is gained by keeping worn-out plants. The Diervillas are suitable for shrubbery planting or for specimen beds, but they are not satisfactory subjects for the wild garden; at all events, there are many other shrubs which would look more at home in such a place. Of late years a few kinds have been used for forcing in spring for conservatory decoration, and they are excellent for the purpose.

D. florida and *D. grandiflora* are a couple of Japanese species which grow into large bushes 5 feet or 6 feet high and 8 feet or more through.

Their tubular flowers vary in character, but are usually about an inch long and nearly an inch across the mouth. They are borne several together in short racemes, and are various shades of pink in colour. *D. florida*, in many respects very similar to these species, is a native of China. The type has pinkish flowers, but a variety, *candida*, has white blooms.

Some Good Varieties.—The chief interest about the Japanese *D. japonica* centres in its variety *hortensis*. This is a bush 3 feet or so high, which bears a profusion of pure white blooms. It is the best of the white-flowered kinds, and is an excellent subject for a bed. Another variety of *D. japonica*, called *Looymansii aurea*, is most noticeable by reason of its golden leaves in early spring. *D. middendorffiana* is a Siberian shrub, notable by reason of its large, sulphur-coloured blooms. Unfortu-

grows 3 feet to 4 feet high and bears rich deep red flowers freely from May until the end of August. An older variety, but a very popular one, is *Abel Carrière*, with deep rose blossoms. *Multiflora* and *van Houttei* are other varieties with deep red or crimson flowers, while *Congo*, with dark red blooms, *Gloire des Bouquets*, *Othello*, *Diderot*, *Emile Galle*, *Lavallei*, *President Ducharte* and *Steizneri* are other showy kinds. For many of these ornamental hybrids we are indebted to the late M. Lemoine of Nancy, who raised so many hybrid shrubs and other plants. D.

XANTHOCERAS SORBIFOLIA.

THIS handsome flowering tree belongs to the same Natural Order as the common Horse Chestnut. The Order is known as *Sapindaceæ*, and embraces many trees and shrubs dispersed over the whole

THE FLOWER GARDEN.

THE ALPINE ASTER AND ITS VARIETIES.

THE majority of perennial Asters or Michaelmas Daisies common in gardens are readily recognised by their Daisy-like flowers, which are generally carried upon many-branched stems, some 2 feet high and upwards. *Aster alpinus* presents a striking anomaly, in that the individual flowers are probably the largest, while the plant itself is the dwarfiest in the genus. It is a low, tufted subject, forming neat, rounded masses of leafage that scarcely exceed three inches in height. The flowers spring direct from the crowns, and are borne singly on stiff, erect stems some six inches to nine inches high. Its dwarf habit and the distinct character of the flowers render it a desirable subject for rock garden planting, in addition to which it presents no cultural difficulty, the plants succeeding in any good garden soil, provided it is well drained and the position open to the sun.

During winter and early spring some protection should be afforded the crowns from the ravages of slugs, as these pests appear to find them extremely palatable, and every bud destroyed at that season means a corresponding loss in flower.

Aster alpinus and its varieties are readily raised from seed, which is best sown in pans of prepared soil under glass in spring, the seedlings being transplanted into pots or boxes, and subsequently planted in a nursery bed in the open. By this method strong plants are assured to flower the following year.

The plant flowers in June, and the blossoms are exceedingly showy, about two inches across, and are borne singly upon 6-inch stems; the ray florets are coloured a bright purple, while the disc is yellow. The variety *alba* is similar in growth to the type, the flowers being white; in the variety *speciosus* the flowers are a rich violet colour and much larger than the type, the stems being about nine inches in height. *Superbus* is another good form, attaining the same height

as the last-named; but the flowers have more purple in their colouring. The two last-named varieties are highly desirable rock plants.

Coombe Court Gardens.

THOMAS SMITH.

JAPANESE IRISES AS BORDER PLANTS.

It should, I think, be more generally known that this group of Irises (*Kämpferi* or *lævigata*) is far more amenable to ordinary border cultivation than is usually supposed, frequent statements to the contrary notwithstanding. At page 96 of *THE GARDEN* it is stated that the "ideal situation is at the margin of pond or stream," though more often than otherwise, because of soil and other things which are not ideal, the plants fail miserably in these and similar situations. Too frequently at the margin of lake or pond or stream the soil is of an ungenerous, clayey nature, tenacious and water-holding to a degree, without richness,



THE ALPINE MICHAELMAS DAISY, *ASTER ALPINUS*.

nately, it is not so hardy as the other kinds. In midwinter the wood does not appear to be hurt, but, like many shrubs from countries where a long and severe winter is experienced, it begins to grow too early in a milder climate, and the young shoots are incapable of withstanding the baneful effects of late spring frosts and cold east winds. It is a plant to persevere with, however, on account of its distinct and beautiful flowers. *D. præcox* is a Japanese species with red flowers. It blooms during early May, somewhat in advance of the other kinds.

Under the collective name of *D. hybrida* many hybrids are grouped. These are very floriferous, and are the best to choose for those people who simply require showy-flowered shrubs. They have been raised by crossing ornamental species, such as *D. floribunda*, *D. florida*, *D. grandiflora* and probably *D. præcox*. One of the most showy and floriferous kinds of all is *Eva Rathke*. This

globe. The plant under notice is a native of North China, and is apparently hardy in this country. It is a dwarf tree, and even in its native habitat its height is given as from 5 feet to 15 feet. It is by no means of rapid growth, and apparently the only way to propagate is by seeds, although root-cuttings sometimes succeed. Its slow growth and the difficulty by which propagation is ensured are doubtless largely responsible for the fact that this shrub is so seldom seen. It has elegant foliage, resembling that of the Mountain Ash, usually preceded by erect clusters of creamy white flowers streaked with red. When in flower it is certainly one of the most handsome of flowering shrubs. When forced, it has few equals, and it is a suitable subject to associate in a conservatory with *Prunuses*, *Staphylea colchica*, *Forsythias*, *Wistarias* and shrubby *Spiræas*. When grown outside it requires a slightly sheltered spot, and in cold climates it needs a south wall.

and of a more or less evil-smelling character, the product of an over-gorged wetness that is as virulent poison to the roots of these plants. I do not say that it is always so, for I know of instances to the contrary; but I also have known of so many failures in such places—due to the fallacious belief that water and continued soil wetness is as a veritable panacea to the ills to which the plants may be heir—that I hasten to give readers of *THE GARDEN* the choice of a useful, inexpensive equivalent when cultivating these Irises.

Border versus Water-side.—For many years I grew the plants with success in well-enriched loamy soils, and I have yet to see finer masses than those so obtained. At the Holland Park Show of 1910, Mr. Wallace of Colchester, famed for his high-class hardy plant culture and exhibits, grouped in near proximity to a streamlet clumps of these Irises bearing the most magnificent flowers I have ever seen, the plants the product of open field cultivation in the famous Colchester soil, far removed from water. Hence the incessant saturation of soil by water is neither essential nor even necessary, while, as I have pointed out, it may be distinctly harmful, or even fatal, to success. We in this country were probably early led astray by the pictures of these plants sent from Japan, showing them half submerged at flowering-time, the result being that the water-side was considered the only place suited to them, quite regardless of soil. This we know to be wrong, and we also know that the border cultivation is more simple and available to a much greater number.

In saying this I have no desire to belittle water-side gardening, or to say a word that would lessen the planting of these Irises in such places on well-considered lines. By this I mean that, however well they may appear to succeed partly immersed, I believe they would do infinitely better if so raised that the root-fibres only reached the moisture. This much, indeed, I have repeatedly proved, though I am willing to admit that there was an appreciable difference in the plants growing in clayey or heavy soils as compared to those grown in light soils. At Wisley, for example, we see the plants beside the water and flowering freely.

I am, however, very well assured that, were these same plants so raised that the root-fibres only touched the water, a greater vigour and finer flowers would speedily follow. Occasionally, too, the failure of these Irises by the water-side is due to the quality of the water, very hard water not being congenial to their requirements.

The Value of Rich Soil.—It is, perhaps, insufficiently recognised that these Japanese Flags have a remarkably voracious appetite. In any soil preparation I should be inclined to include at least one-third of manure, one-fourth good leaf-mould, and the remainder of loam of a moderately light character. In such a soil the roots ramify freely and form into huge mats not far from the surface. The plants revel,

too, in free supplies of liquid manure, and, where it can be employed, this may be given without stint.

Transplanting.—It is a mistake to transplant these Irises in big masses intact, and the best time for division and replanting is March and early April. The work of dividing is best done just as they are awakening to a season's work. At that time they may be freely divided; not hacked by spade or chopper, but having laid a clump on its side, drive two small hand-forks, placed back to back, deeply into the rootstock below the crowns, and finally wrench outwards in opposite directions. In this way the tough, almost woody, mass is separated without loss and with a minimum of injury. The operation, if need be, may be repeated in order to reduce the plants to three or four crowns apiece. I need

variety named Bertini will not only succeed during a scorching summer, but if given the right rooting compost and sufficient watering, will revel in it. The colour is vermilion-scarlet, with petals long and pointed. It is also a most vigorous plant and produces the largest tubers of any Begonia with which I am acquainted.

Tubers started in March in gentle heat and transferred to frames when fit, using partly-decayed leaves, will make flowering plants by the first week in June. If carefully lifted with a good ball of soil and transferred to beds containing a compost of loam, half-decayed leaves and cow-manure, an almost immediate effect will be produced, which will continue throughout the summer and autumn until the plants are cut down by frost. Horticulturists who favour

Begonias for bedding and are not acquainted with this variety would do well to give it a trial.

A. J. COBB.

The Gardens, Duffryn, near Cardiff.

SEASONABLE NOTES ON AURICULAS.

THE results of the notes which I had the privilege to contribute to *THE GARDEN* of January 27 have surprised me. I deplored the waning popularity of the flower, but correspondence proves that there still remain many ardent worshippers at the shrine. I was aware of the great popularity of the flower in and around the metropolis of the Midlands, and should like to learn from other sources that there are as enthusiastic workers elsewhere as there. One correspondent, while thanking the Editor for instituting a column devoted to his favourite flower, includes a happy grumble that I should suggest a distance of 2 inches asunder in sowing the seeds. He is worried to know where those who sow 400 or 500 seeds each year would be able to find accommodation for the number of receptacles which such a distance of setting would involve. There is much in this argument, and I will agree to the sowing being done at 1 inch, provided that this is not interpreted to mean half that distance or less, as is too commonly the case. Mr. C. Turner's note on the popularity of the Auricula on page 66 of *THE GARDEN* is of much



AURICULA FAVOURITE, AN EXCELLENT SHOW VARIETY.

interest, and I have no doubt that he is correct in his assumption that the growing favour in which Polyanthuses and garden Primroses are now held accounts for the comparative scarcity of the Auricula. The tendency at present seems to be to grow only those plants which do not involve the slightest trouble, but which make a brilliant display in the garden. Auriculas must be studied, loved and cared for, and at the end the reward will be an exquisite refinement with no gaudiness at all. However, I now hope to see them rise in general esteem.

A GOOD BEDDING BEGONIA.

It has generally been conceded that Begonias as bedding plants were far from successful during last summer. Even those fortunate enough to be able to supply their plants with copious waterings had only a moderate return for their labours. The dry atmosphere was altogether too much for these shower-loving plants. It is some consolation, however, to know that all varieties do not object to the tropical conditions. I have proved to my entire satisfaction that the

hardly add that these divided examples will not flower before a year or more has passed. Plant 18 inches apart in irregular colonies or groups.

E. H. JENKINS.

Twelve Show Auriculas. Those who have studied the show or prize Auricula know that it is divided into four sections or groups, and that there are numerous varieties in each. With a view

to aiding the novice in forming a collection, I purpose now to give the names of twelve varieties, embodying representatives of each group, that would form a nucleus from which the grower could proceed to any length convenient to himself. In the green-edged division choose John Garrett, Abbé Liszt and Rev. F. D. Horner; in the grey-edged, Colonel Champneys, George Lightbody and Lancashire Hero; in the white-edged, Acme, Heather Bell and Reliance; and in the selfs, Black Bess, Heroine and Mrs. Potts. To the last-named trio may well be added the beautiful variety illustrated, which is of fine form, substance and colour. Let me say at once that I do not enumerate these as the finest varieties of their respective divisions, but as sorts of unquestioned merit which present no material difficulties of cultivation. With Auriculas, as with many other flowers, some varieties are more difficult to grow to perfection than others, and it is far from my wish to start the tyro with those that are likely to fail or to eke out nothing more than a miserable existence. Those given are all excellent doers, and the veriest novice will be able to grow them well.

THE GREENHOUSE.

CULTIVATION OF THE CYCLAMEN.

FOR usefulness, attractiveness and profusion of bloom, Cyclamen as winter and early spring flowering plants stand unrivalled. Besides being beautiful and fresh-looking when well arranged in the warm greenhouse, they make handsome plants for drawing-room decoration, and the flowers stand well in water if pulled out and an inch is cut off the stem. There are now several beautiful colours among the giant-flowered type, and these, when well done, will amply repay the grower for the trouble bestowed upon them. The accompanying illustration is particularly interesting, since it depicts, on the right, *Cyclamen persicum*, the native species or wilding from which the cultivated forms have sprung. The large plant of the giant-flowered type is shown for comparison, and clearly demonstrates the wonderful improvement in size of flowers and floriferousness which has taken place.



A MODERN VARIETY OF CYCLAMEN ON THE LEFT, WITH THE WILD SPECIES, *C. PERSICUM*, ON THE RIGHT.

Twelve Alpine Auriculas.—In the alpine section there is not such a wide difference in the constitution of the plants, but with them, as with the others, there are some that grow more vigorously than others. I will, therefore, again restrict my selection to one dozen and recommend only those which I know to be of excellent character, both in quality of the flower and constitution: Comet, Mrs. Harry Turner, Mrs. Ball, Pallas, Toujours Gaie, Dean Hole, Diadem, Emperor Frederick, Florrie Henwood, Mrs. Martin, Unique and Mrs. Dodwell.

Offsets and Top-Dressing.—Some of the choicest show Auriculas do not produce many offsets, hence the price of the plants continues high, as propagation is so slow; but should any now be present on the plants, they ought to be promptly removed to relieve the roots of the strain of feeding them, and thus favour progress in the main plant. If the plants have not yet been top-dressed—I, personally, prefer to finish the task by the end of February—see to it at once, using sound loam to displace the old material that is removed.

F. R.

How to Treat Old Corms.—Now that the flowering period of Cyclamen is nearly past, perhaps a few remarks about the treatment of old corms may be of use to some readers of THE GARDEN. I know that some gardeners advocate treating Cyclamen as biennials, but I do not agree with them, for it is quite impossible to get the large, handsome, well-flowered specimens one frequently sees, produced from three to five year old corms, from corms one year or a year and a-half old. I have seen plants of Sutton's Giant White and Pink carrying from two hundred to two hundred and thirty full-sized, perfectly-formed flowers, and the foliage was all that could be desired. The corms were four years old, and I do not think that, however well they may be grown, the same number of flowers could be had from corms eighteen months old. I would certainly discard any cracked or gnarled corms; but so long as they are smooth and firm, there is no fear but that they will produce abundance of fine flowers if properly treated. As soon as the plants are past flowering, they should be thoroughly cleansed of all flower-stems and bad leaves, and given a sharp syringe

with Quassia extract. They should then be placed on a shelf or stage near the roof glass and kept fairly dry at the root. I do not believe in drying them off altogether. I find that they start into growth much more freely if the pots are tapped occasionally and the very driest plants watered. A perfectly cool house is best for them in the meantime, simply giving enough heat to exclude frost. As the days lengthen and the sun gains strength, a heavy syringing every morning will keep them supplied with sufficient moisture until they have made some growth, when watering must again be carefully attended to. From now onwards care must be taken not to run the water into the centre of the plant, or damping of the flowers and foliage will result. When deemed safe from frost, the plants should be placed on a bed of ashes in a cold frame, where they may remain all the summer.

Potting-Up.—Although quite good results may be had by simply top-dressing some of the larger pots, I am in favour of annual repotting of the whole stock. It is immaterial whether this is done just after the flowers are past or when the plants have made some growth. The potting compost that suits Cyclamen well is fibrous loam, broken up roughly with the hands, with the addition of a shovelful of good clean wood-ashes, one 5-inch potful of soot and one 5-inch potful of Peruvian Guano to each barrow-load of loam. They should be potted fairly firmly and the bulb scarcely half buried in the soil. Shading is necessary during sunny weather, and air must be carefully admitted, avoiding draughts as much as possible. The best sort of frame is one that has a ventilator at the back. Air can then be admitted without tilting the lights. After growth is well advanced, the plants must have abundance of air, and on fine warm nights the lights may be removed altogether, but on no account should the plants be left exposed to heavy rains. Early in September the plants should be housed, but still kept airy and shaded from bright sunshine. A position about

two feet from the roof glass is best for them until the flowers begin to open. Syringing morning and evening should be continued until the first flowers begin to expand, and a careful watch must be kept for green fly. An occasional fumigation with XL All Nicotine Compound will keep this pest down. When cold weather sets in, a night temperature of about 55° should be maintained, and air must now be very carefully admitted, as it is after the application of fire-heat that cold draughts do most damage. When well rooted in their flowering pots, Cyclamen are much benefited by careful feeding with some good fertiliser, and I find nothing suits them better than 'Clay's', with an occasional change in the shape of sheep-manure and soot put in a bag and steeped in a tank of water. Over feeding is an evil that must be guarded against. The water should be just coloured with the liquid, and it is much safer and more beneficial to the plants to feed with weak doses and often than with occasional strong ones.

JAMES G. BESANT.

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GARDENING FOR BEGINNERS.

HOW TO PRUNE ROSES.

TO the average beginner in gardening there are few operations which seemingly present greater difficulties than the pruning of Roses, yet, once a few fundamental principles are grasped, there is no operation that is more simple, that is, so far as it applies to the ordinary types of Roses which the beginner or amateur may be expected to grow. So as to make the pruning of these Roses as clear as possible, we publish on this page three illustrations from photographs, and a careful study of these, in conjunction with the hints given here, will enable anyone to prune their Roses with a large degree of success.

Bush Roses.—Fig. 1 represents an ordinary Hybrid Perpetual Rose of fairly vigorous character which has been pruned moderately severely to provide blooms for garden decoration. It will be seen that all old wood has been cut clean away, and that the growths have been shortened considerably, each being cut close to a bud. Now if this had been an extra strong-growing Rose, the shoots would not have been cut back so severely, and if it had been a very weak specimen, they would have been shortened more. This needs



FIG. 1.—A BUSH ROSE PRUNED MODERATELY TO PRODUCE A QUANTITY OF BLOOMS.

Standard Roses.—These are pruned in practically the same way as advised for bush Roses of the Hybrid Perpetual, Hybrid Tea and Tea sections.

Newly-Planted Roses.—Fig. 2 represents a newly-planted Hybrid Tea Rose of rather vigorous habit. Newly-planted Roses always need rather hard pruning, because the roots have been disturbed and would not be capable of supplying long shoots with sufficient nutriment. By pruning to the bars shown on the shoots in this illustration we leave about four buds on each, and thus counter-balance the disturbance of the roots. This hard cutting back of newly-planted Roses applies proportionately to practically all types, climbers included, although the shoots of the latter, being longer to start with, will be left longer, 18 inches to 3 feet, according to their strength and solidity.

Climbing Roses.—Fig. 3 represents a young established plant of Dorothy Perkins, a Rose that is fairly characteristic of the Japanese Hybrid Roses now so extensively grown as climbers. This small plant was selected for illustration, as a large one would not show the points so well. It was planted in the spring of last year, and made several not very strong but firm, well-ripened shoots. All the old wood has been cut away close to the ground to induce new shoots to spring up from the base this year, and the three wand-like shoots have just had their soft tops removed. These shoots will, if all goes well, flower this year, and if others spring up during the summer to take their place, as no doubt they will, the shoots seen now will be removed entirely next August or September, after they have finished flowering. On the other hand, one or more of them may throw out a long, vigorous young shoot, and if it does, this also will be retained for flowering next year. The point to remember in these Japanese Roses is that new wood well ripened, is necessary.

Climbing Tea, Hybrid Tea, Hybrid Perpetual and Noisette Roses need the oldest wood cut out and the side growths shortened back to a good plump bud. The length of the side shoot left will depend almost entirely on its strength and the space available.

What to Prune With.—The best pruning instrument is undoubtedly a good, sharp pruning-knife. This makes a clean cut and does not injure the bark. March is a good month for pruning most of the ordinary types of Roses, except the Hybrid Japanese, which, as already stated, should have old wood cut out during August and September.

Rules for Pruning.—1. Cut out any dead wood and see that the cut is made in live wood. 2. Cut out any shoots that cross others. 3. Cut out very weak shoots right down to the ground. 4. Always prune to a plump, almost dormant bud that is pointing outwards. 5. Prune vigorous bushes lightly. 6. Prune weak bushes severely. 7. When Roses of moderate quality are desired in abundance for garden decoration, leave more shoots, and leave them twice as long, as you would if only a few blooms of exhibition quality are required. 8. Prune severely all newly-planted Roses, whether they were planted last autumn or this spring. 9. If not done last autumn, cut away the old wood from Hybrid Japanese Roses and just remove the soft tips from the firm young rods. 10. Never cut out a shoot unless you understand why it should be removed.



FIG. 2.—A NEWLY-PLANTED BUSH ROSE. THIS SHOULD BE CUT BACK HARD TO THE BARS AS SHOWN.

a little explanation. A vigorous-growing Rose, if cut back severely, would grow more vigorously still the following summer, and, in addition, would not give us so many flowers. Likewise, a weak-growing bush, if only pruned lightly, would produce even weaker wood during the summer, and so would gradually deteriorate. If the grower wanted this particular bush to grow only a few blooms of high quality for exhibition, he would cut the shoots back to within 3 inches of the soil. This method of pruning is also adopted with Hybrid Teas and Teas.

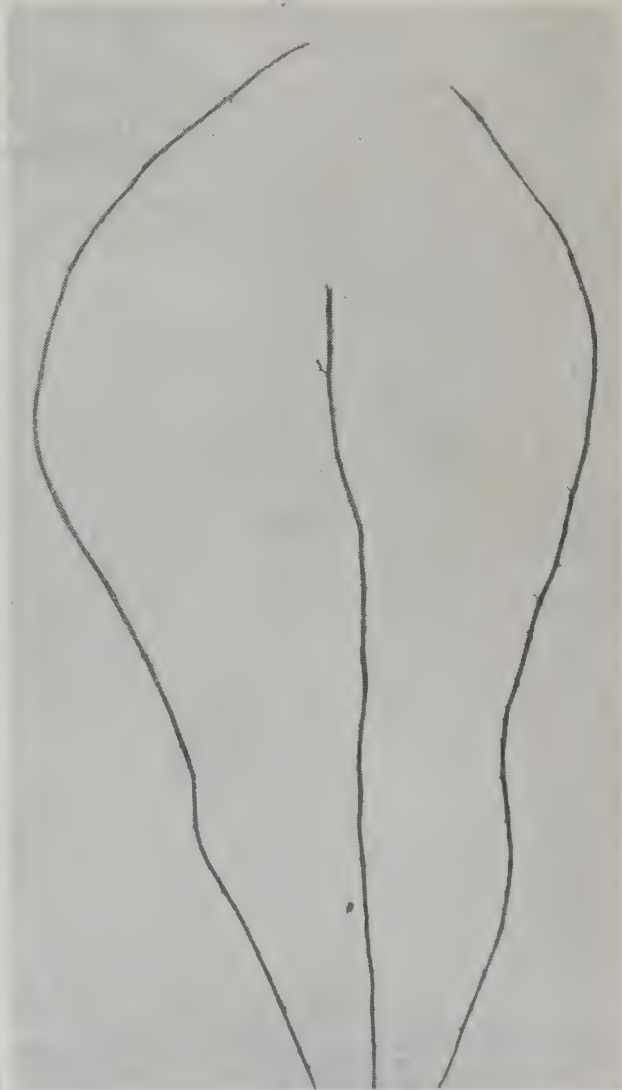


FIG. 3.—A YOUNG JAPANESE ROSE WITH THE SOFT TIPS REMOVED FROM THE YOUNG RODS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Kitchen Garden.

Lettuce.—Transplant into a warm border in the garden plants that were pricked out in the cold frame. Make firm, and protect the plants from the birds by stretching black cotton over the rows. If wireworm is present in the soil, lay traps of pieces of Carrot at intervals and examine daily. Both the Cos and Cabbage varieties may be planted in this way.

Seed-Sowing.—Sow now in boxes and raise in a cool structure the following: Cauliflower Autumn Giant, Brussels Sprouts for early buttons, Cabbage All Heart, Cabbage Blood Red and Leeks for later supplies.

Cauliflowers.—Transplant into boxes or frames the young plants from earlier sowings made under glass. Plants that were sown during the autumn and wintered in cold frames should have the lights removed entirely, whenever the weather permits, to promote sturdy growth.

Herb Border.—Any replanting that may be necessary to this valuable adjunct to the kitchen garden should be done without delay. Upon signs of deterioration of any of the subjects, these should be lifted and the border thoroughly well worked, incorporating some manure and lime, the latter especially on heavy soils. The perennial kinds may be increased or divided, as the case may be, and space should be left for the annuals to be sown or planted out at a later date.

Beetroot.—A sowing of Beetroot of the Globe or Turnip-rooted variety may be made, where space permits, in a cold frame on a mild hot-bed, sowing at the same time a few Radishes between the rows.

Celery.—Sow the seed now, or within the next few days, of varieties intended for the maincrop supplies. Sow thinly, and as soon as germinated elevate the pots or pans close to the glass.

Plants Under Glass.

Chrysanthemums.—Pot on as they require a shift singly into 3-inch pots, and water carefully for a time. The earliest-potted plants will need water oftener and more air admitted on favourable occasions.

Campanula pyramidalis.—Plants of the Chimney Campanula, as it is commonly called, that were raised from seed last year and have been wintered in cold frames should be looked over, the surface soil lightly stirred, and a top-dressing given and made firm.

Achimenes.—The tubers of these that have been resting in a warm house may now be shaken out carefully and repotted or planted in baskets. When grown in wire baskets and suspended in a warm house, these are very effective.

Pot Roses.—Any plants of these that are left in their winter quarters may now be brought out, the pots washed, and the growths pruned and started in a gentle heat. Avoid cold draughts, as this is conducive to mildew. Earlier-introduced plants will benefit greatly by applications of properly-diluted farmyard manure.

The Conservatory.—Endeavour to keep this as attractive as possible by introducing fresh batches of forcing plants, such as Azaleas, bulbs in variety, Lilacs, Wistarias, Prunus and Deutzias. Watering is best done early in the day, and the paths should be kept as dry as possible. Ventilate whenever the weather allows, if only for a few hours.

Liliums that are being pushed along for Easter will need warmth and moisture, and now that the pots are crowded with roots, abundance of water and occasional feeding. Fumigate lightly if green fly makes an appearance on the growth.

Zonal Pelargoniums.—Take cuttings now and insert firmly in 5-inch pots in a sandy compost. Water with a rosed can and stand on a shelf near to the glass in a greenhouse temperature.

The Flower Garden.

Michaelmas Daisies or Perennial Asters.—The sooner these are lifted now and divided the better, as growth will soon be moving fast. Where space permits, a border should be set aside for these charming autumn-flowering plants, as it is then that they are seen to their best advantage,

though, of course, in a mixed border they are excellent. Select nice young plants, not too large, otherwise too much growth will ensue and become crowded.

Perennials and Shrubs.—For growing in shrubberies some of the stronger-growing Asters, as the *Novi-Belgii* and *Novæ-Angliæ* types, are excellent, as they make good growths and are capable of looking after themselves. They also make useful material for cutting, and thus save the borders. Other plants that do well in similar positions are Delphiniums, Solidagos, Heleniums, the Everlasting Sweet Peas, Pæonies, Polygonums, &c.

Begonias.—The tubers that were saved from last season should be examined without delay and started in a warm house in boxes until growth commences, when they may be potted up singly into pots according to the size of the tuber. Seed of the tuberous varieties that was sown early in the year will need pricking out carefully into other receptacles in a fine compost containing some peat and plenty of sand.

Fibrous-Rooted Begonias.—These are equally effective for bedding, and may be raised in a gentle heat and transferred to frames eventually before planting out permanently.

Fruits Under Glass.

Pot Vines.—These will require much attention now and careful watering and feeding. While the bunches are in flower less atmospheric moisture will be needed, though I do not advocate a scorching dry atmosphere. Ventilate more freely, avoid cold draughts and close the house a little later in the day. Pollinate the flowers by lightly drawing the bunch through the hand or tapping the rods sharply. As soon as a set is assured, continue as before with a brisk, moist temperature.

Early Permanent Canes.—Endeavour to keep these as strong as possible by judicious airing. Close the house early in the day and take full advantage of the sun's rays. If the house at night smells dry, damp down the paths the last thing.

Mealy-Bug is a troublesome pest, and during early spring, when the sun is shining, can be detected and killed with a little methylated spirit, and with perseverance this pest may be considerably lessened.

Watering.—Where several houses claim attention, it is well to do this systematically and make notes of the time each one was done and what stimulants were employed. If possible, use water chilled to the temperature of the house.

Strawberries.—Earliest batches should be thinned as soon as the best-set flowers are noticed, and for these it is advisable not to retain too many. The plants will need plenty of water now at the roots and a warmer temperature. Successional batches that are coming into flower should have an airy and light position in a forcing-house to enable the flowers to set. E. BECKETT, V.M.H.

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FOR NORTHERN GARDENS.

The Flower Garden.

Protecting Material.—Straw, &c., may now be taken off shrubs and Roses.

Jasminum nudiflorum.—Prune to produce rather long shoots, if these are in request, for vase decoration.

Spiræas.—Autumn-flowering kinds of the shrubby section should be cut hard back to secure neat and floriferous bushes. Those flowering in summer must not be pruned.

Trellis Roses.—If not thinned of old wood, this should be seen to at once, and at the same time the young shoots selected for this season's flowering. A good deal of wood may be left on the *wichuraiana* hybrids. After pruning, tie them neatly to the wires. Dress the ground with a compost, of which half at least should be of a manurial nature.

East Lothian Stocks.—Transplant seedlings into shallow beds of soil prepared in cold frames, the soil being made rather firm to induce the production of many fine roots, and allow 4 inches between the plants. They succeed best when rather under-watered, and, once re-established, enjoy abundance of air. Meanwhile keep the frames close.

Antirrhinums.—These, though small, should be transplanted from the seed-boxes into others, in which the plants will make better progress. I merely place half an inch of leaf-soil for drainage in the bottom of the boxes and 2 inches of compost above that. Two inches apart is quite wide enough to arrange them, and, till well established, to apply water dip the boxes into a tank, but not so deep as to flood the surface.

Indoor Fruit.

Early Peaches should be thinned to a number sufficient for a crop.

Peach Trees in all stages of growth should have the young growths arranged, just enough to fill the spaces left for them. Ply the syringe to keep away red spider.

Young Vines.—Material for borders should be got into the vinery in readiness for planting the Vines three weeks hence.

Ventilating Vineries.—The sun does no harm provided the temperature rises gradually, which is assured by ventilating in the early morning to keep it steady, increasing ventilation with the greatest care, so that the cold air is not felt. It is essential to apply a slight shading of water and whitening to the glass if the heat cannot be otherwise regulated.

The Greenhouse.

Shading.—If the sun affects any plants injuriously, apply a slight shade. Herring-nets do well.

Fumigating.—The great changes of weather at this season encourage plant insects. Repeated fumigation is, on that account, essential, and is best as a preventive.

Carnations.—A selection of border varieties is very useful for summer flowering, Lady Hermione, the fancies and yellows, where appreciated, being extra fine if grown in pots for this purpose. A 7-inch pot is large enough for one plant, and an 8-inch or 9-inch for three plants. In Scotland they succeed best if grown under glass right on. Pot them up now.

Lapageria rosea and the white variety should be overhauled, the foliage washed with an insecticide and the straggling shoots tied neatly to wires. This plant is admirably adapted for roof covering, but does best when partially shaded.

Liliums.—Auratum and speciosum must now be seen to. Bought-in bulbs should be merely placed well down in the pots on the compost, with a little round the bulbs, and allowed to come away slowly of themselves, more compost being given as growth advances. Established auratums must not be shaken out at this time, but speciosums may. They make handsome specimens several in a 9-inch or 10-inch pot.

Palms.—Young plants requiring a shift should be potted now. Most Palms succeed in a rather light, fibrous loam, which keeps in good condition longer than peat or leaf-soil. Established plants of a suitable size for decorative purposes need only to have the surface freshened and watered with liquid strengthened with some manurial agent. Soot, superphosphate of lime, sulphate of ammonia and diluted cow-house drainings are all valuable. The foliage can be kept a deep green only by this means.

The Kitchen Garden.

Rhubarb.—Dig in a heavy dressing of half-rotted manure in the Rhubarb quarter. If old, take up a portion of the crop, divide the roots and replant 6 feet apart.

Seakale.—It is getting quite late enough to plant this fine vegetable. If the ground is ready, plant the thongs by means of a dibber. The tops should be slightly covered with soil, and if a few Radish seeds are scattered along the lines, they will serve later as marks to enable hoeing to be performed without damage to the Seakale.

Late Cabbages.—Strong autumn-raised plants may be planted out 2½ feet to 3 feet apart. Some time during the ensuing week sow more seeds of Dwarf Drumhead and Winningstadt, also of a large Savoy for kitchen use. Savoy may also be planted if they, too, were sown in autumn but it is not a profitable way to grow these.

Leeks.—Select a few of the best plants and transplant them to a position where they can ripen seed early, such as a south wall. If ground is needed for other crops, the whole of the remaining Leeks may be lifted and laid in at the north side of a wall, where they will remain in good condition till June.

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Tynninghame, Prestonkirk, N.B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SEEDLING CARNATIONS (J. McL.).—Place in a cold frame, and towards the end of the month pinch back 2 inches of the tops of the plants to induce shoots to break from the stem lower down. As soon as a good break of young shoots is obtained, repot the plants into slightly larger pots, using good turfy loam with a light sprinkling of bone-meal added, and replace in the frame.

SWEET PEAS AND BASIC SLAG (J. H. Weaving).—It is quite clear that you are a generous man, and that you are determined not to let your Sweet Peas starve to death. By all means utilise the stations, as we do not think that the plants will suffer in the slightest degree; on the contrary, they will probably appreciate the food. We knew of a case where 7lb. of superphosphate of lime to the square yard was advised instead of 7oz. One man worked into his soil upwards of four pounds and saved the remainder for surface application. He grew the finest Sweet Peas he had ever had in many years of experience. You may take courage from this.

CLEMATIS AND VIOLAS (Gibson).—If your chief desire is a screen in so small a space as 12 feet in length, you would be well advised to confine yourself to one kind of Clematis only, and the variety we would suggest would be the early white-flowered *C. montana*. If, however, you desire to combine a flower fence that would presently also afford a screen, the varieties of *C. viticella*, and *C. V. rubra* in particular, would be one of the best. The ordinary *C. Jackmanii* is excellent for permanent planting, but all the Clematises would require a good deal of attention in training, regulating and pruning to provide anything like satisfactory results. Your 6-feet-high fence is not ideal for a plant like the Clematis, which loves to climb, and in doing so often shows its bare legs. Were you not in so great a hurry, some of the wickiana roses or the showy American Pillar would be far better for the size and extent of the fence, and three or four plants of either of the latter would suffice. Of all the Clematises save the first-named, you would require fully twice that number to give immediate effect. All the plants could be obtained in pots, and the planting should be done forthwith. The Violas have probably no equal for the position you name, and two of the best in the shades you require are Maggie Mott and J. B. Riding, and both are excellent bedders.

FRUIT GARDEN.

LOGANBERRIES (J. McL.).—These should be pruned in the same way as Raspberries, namely, by cutting away (down to the ground) the old branches which had borne fruit last year, leaving only those branches to grow on which had been formed last year. It is these only which will bear fruit. Each plant should be tied to a pole 7 feet or 8 feet high, as the Loganberry grows to a great height when planted in good soil.

APPLES, DESSERT AND COOKING (J. M. L.).—The following will be found among the best, your land being poor and inclined to be hard. You should stir it up deeply and add half a barrow-load of rotten manure to the soil of each tree before planting, and after the tree is planted sprinkle thinly over the surface of the soil, as far as the roots extend, a little bone-meal, and fork it in afterwards 3 inches deep, afterwards placing a layer of manure 3 inches deep over the surface soil round the stem of the tree and over the roots. This will encourage the growth of surface roots, and the surface manure will find them and keep them there. Dessert varieties—Gladstone, ripe July and August; Devonshire Quarrenden, July and August; Worcester Pearmain, September; James Grieve, September and October; King of the Pippins, from October to Christmas; Cox's Orange Pippin, from November to February; Allington Pippin, November to February; Blenheim Orange, December and January; Lord Hindlip, January to May; Barnack Beauty, Christmas to February; Sturmer Pippin, March to June. Cooking Apples (these are given in the order of ripening)—Early Victoria, best Codlin; Lord Grosvenor, Grenadier, Golden Noble, Lord Derby, Bismarck, Encore, Lane's Prince Albert, Edward VII., Alfriston, Newton Wonder and Bramley's Seedling.

MISCELLANEOUS.

STERILISING SOIL WITH FORMALIN (M. L. M.).—About two pounds of commercial 40 per cent. formalin should be used to fifty gallons of water for sterilising soil. The soil should be subsequently well stirred and the formalin permitted to evaporate before it would be safe to sow seeds or transplant plants into it.

LAYING-OUT A GARDEN (J. B.).—We think the general arrangement quite good in the circumstances, and, so far as plot A is concerned, the better way would be to grass it down and strike out an oval bed for summer-flowering subjects, such as Antirrhinums, Pentstemons, or even tuberous-rooted Begonias, if you could lighten the soil somewhat. In plot B, in addition to the Roses already planted, you might arrange a variety of hardy herbaceous plants—Iris, Delphiniums, Michaelmas Daisies, single and double flowered Pyrethrums, hybrid Columbines, perennial Marguerites, Sweet Peas, Asters, Stocks, Poppies, Carnations and the like. Just what should be grown would depend very much on your own choice, and for this year at least, considering the nature of the soil and the fact that it stands in need of generous cultivation, you might well confine your attention to annuals. For example, unless you are sure that wireworm does not exist in the soil, Carnations should not be planted. With good cultivation such a soil would grow Roses well, and these may still be planted. In the vegetable plot you could only indulge the more serviceable kinds, as Peas, French Beans, Broccoli and the like, that are more difficult to obtain fresh in the usual way. For such things as Potatoes there would be no room.

NAMES OF PLANTS.—*A. Bosc.*—Rhododendron præcox.—*Miss A. M. E. L., Abergavenny.*—Iris japonica (syn. *I. fimbriata*).—*Mrs. C., Drogheda.*—Narcissus pallidus præcox.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

THERE was a magnificent display of spring flowers at the fortnightly exhibition of the Royal Horticultural Society held at Vincent Square, Westminster, on Tuesday, March 5. In addition to the blaze of colour created by Azaleas, Carnations and Orchids, there were numerous competitive classes for spring bulbs.

FRUIT AND VEGETABLE COMMITTEE.

Present: J. Cheal, Esq. (chairman), and Messrs. W. Bates, A. Dean, J. Gibson, W. Pope, W. Fyfe, J. Willard, W. E. Humphreys, A. R. Allan, A. Bullock, F. G. Treseder, W. Crump, G. Reynolds, J. Davis, W. H. Divers, G. Wythes, J. Harrison, A. Grubb, A. W. Metcalfe, Owen Thomas, G. Kelf and F. Perkins.

Messrs. Sutton and Sons, Reading, once again showed what could be done with vegetables at this season. The Broccoli were remarkable for their fresh and clear white appearance. The varieties of Broccoli shown were Snow White and Superb Early White. The former has well-protecting leaves, which tend greatly to improve the white heads. Mushrooms, Seakale and Lettuce were wonderfully well shown, and the centre of this interesting collection was occupied with variegated Kale in showy hues ranging from deepest purple to pale lemon in colour. Silver Knightian medal.

A silver-gilt Knightian medal, the highest award made by this committee was gained to the Duke of Rutland, Belvoir Castle, Grantham (gardener, Mr. W. Divers), for a highly meritorious collection of Apples. The fruits were well coloured and well preserved.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), Sir Jeremiah Colman, Bart., Lieutenant-Colonel Sir George Holford, and Messrs. J. O'Brien, H. J. Veitch, Gurney Wilson, S. H. Low, R. A. Rolfe, R. G. Thwaites, T. Armstrong, A. McBean, W. Cobb, J. E. Shill, J. Charlesworth, H. G. Alexander, J. Cypher, W. H. Hatcher, W. P. Bound, A. Dye, C. Cookson, W. H. White, C. J. Lucas, J. S. Moss and de B. Crawshaw.

An interesting collection of Dendrobiums was sent by Sir Jeremiah Colman, Bart., Gatton Park, Surrey. The variety Lady Colman, purple, with deep maroon eye, came in for general admiration. All of the plants shown bore evidence of good cultivation, and reflected credit upon Mr. J. Collier, the able gardener.

The magnificent group of Orchids sent by Lieutenant-Colonel Sir George Holford, K.C.V.O., Westonbirt, Tetbury, was equalled only by that which came from the same source a fortnight ago. Cattleyas formed the outstanding feature of this collection, and the centre of the group was occupied by a massive plant of Cattleya Trianae Hydra almost hidden with its profusion of blooms. Beautiful plants of Lælia anceps schroderiana and the yellow Odontoglossum Canary Bird were worthy of special mention in a group of exceptional merit.

Messrs. Armstrong and Brown, Tunbridge Wells, staged an extensive and in every way meritorious collection of Cattleyas, Odontoglossums and Cypripediums. The centre of this grand collection was composed entirely of Dendrobiums, the lovely white *D. nobile virginale* being most conspicuous.

Messrs. Sander and Sons, St. Albans, had a collection notable for the many plants of botanical interest. The pendulous flowers of Trichopilia suavis and the arching sprays of Dendrobium Hillii (pale yellow) were greatly admired by Orchid enthusiasts.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, Middlesex, made a showy display with Cattleyas, Phalaenopsis schilleriana, Dendrobiums in variety and Odontoglossums. Cœlogyne pandurata (pale green, with jet black lip) was shown in good condition.

Messrs. James Veitch and Sons, Limited, Chelsea, staged a miscellaneous group of intense interest and the essence of good cultivation. Large and well-finished flowers of Brasso-Cattleyas and varieties of Cattleya Trianae were seen in the height of perfection, while Odontoglossums and Cypripediums came in for their full share of admiration, especially from the lady visitors. The deep plum-coloured Pleurothallis Roezlii was included in the group.

Messrs. Hassall and Co., Southgate, staged an admirable group of Angraecum sesquipedale, associated with Cattleyas and Odontoglossums in variety.

Messrs. Cypher and Sons, Cheltenham, had a small miscellaneous group comprising Dendrobiums, Platyclinis, Masdevallias and Odontoglossums.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman) and Messrs. C. T. Drury, W. J. Bean, J. Green, T. W. Turner, J. W. Barr, R. C. Notcutt, G. Reuthe, F. H. Chapman, C. Blick, J. F. McLeod, William Howe, J. Dickson, W. Bain, C. Dixon, Charles E. Shea, J. T. Bennett-Poe, W. P. Thomson, E. H. Jenkins, W. J. James, G. Paul, Charles E. Pearson, Rev. F. Page-Roberts, H. J. Cutbush, R. C. Reginald Neville, R. Hooper Pearson and J. Jennings.

Messrs. Barr and Sons, Covent Garden, displayed an interesting bank of Crocuses, both species and bedding varieties, with such other plants as Saxifraga Elizabethæ, S. apiculata alba, S. burseriana magnifica, S. Sancta, S. apiculata, together with pretty colonies of Iris reticulata, Muscari azureum, Sisyrinchium grandiflorum, Narcissus triandrus albus and other interesting plants. Hybrid Freesias were very beautiful. The firm also made their first display of Daffodils, the lovely self yellow King Alfred appearing as a background to many seedlings, choice, novel and distinct.

Mr. Maurice Prichard, Christchurch, had a delightful lot of alpine, yellow and white Saxifrages, Primula cashmireana, Megasea Stracheyii (lovely in colour), Cyclamen Coum and many other charming plants.

Messrs. G. and A. Clark, Limited, Dover, had an exhibit of alpine and shrubs, the group including Polyanthus and Primroses in variety.

The Misses Hopkins, Shepperton-on-Thames, had a very charming exhibit of alpine on rockwork, Gaultheria, Meconopsis, Hepatica, Thymes, Dog's-tooth Violets, Ramondias, Primroses, Fritillaries and others, in conjunction with dwarf shrubs, all playing a part.

Messrs. Stuart Low and Co., Enfield, again arranged pans of Cyclamen in company with Azaleas, Acacias, Correas, Camellias and other plants. Gerberas, too, were freely displayed. The firm also staged excellent vases of Carnations, exhibiting plants in flower of their new Baroness de Brien to show the habit of growth and freedom of flowering. It is, we think, a variety of great merit.

Messrs. James Veitch and Sons, Limited, Chelsea, had superbly-grown examples of their giant white Cyclamen, also others of crimson and salmon. Tillandsia Zehinii, with scarlet-veined leaves and stems and yellow flowers, was conspicuous. Cineraria Antique Rose, Narcissus Poetaz Elvira, Primula kewensis and Azaleas were also noted.

Mr. C. Engelmann, Saffron Walden, had an extensive exhibit of Carnations, the chief of these being Triumph (crimson), Lady Northcliffe (clear salmon), Lady Meyer (deep pink) and Carola.

Mr. Bertie Bell, Guernsey, showed his new variety Coronation, White Wonder and Mrs. C. W. Ward.

Messrs. T. S. Ware, Limited, Feltham, had a delightful lot of alpine in pans, Sanguinaria canadensis, Megaseas, Omphalodes nitida, Rosmarinus officinalis prostrata, Trilliums, Anemones, Bletia hyacinthina, Lithospermums and Saxifrages in variety, among others, making a good show.

Mr. Clarence Elliott, Stevenage, had a charming rockery arrangement, displaying in bold, spreading carpet groups such things as Saxifraga apiculata, S. oppositifolia, S. o. splendens, S. burseriana Gloria (a gem in its way), S. b. speciosa, S. Elizabethæ and many others.

Messrs. Cannell and Sons, Swanley, had a lovely array of Zonal Pelargoniums, which they displayed in handsome bunches, Arabic, Snowstorm, Saxona and St. Louis being some of the more notable sorts. Begonias in many distinct kinds, Cinerarias and the rarely-seen Isoloma hirsuta were also on view.

Messrs. Young and Co., Cheltenham, had a lovely group of Carnations, displaying such as Duchess of Devonshire, intense crimson, and very fragrant; Hon. Lady Neeld, in the way of Marmion, and very free; Lady Henderson, a very handsome pink-flowered variety, and a coming flower; and Mikado, one of the most popular of the fashionable heliotrope shades of the moment.

Messrs. Paul and Son, Cheshunt, brought an extensive series of home-grown Lilacs in sturdy, well-flowered plants. All the leading commercial sorts were staged, and left no room for doubt as to their superiority.

Messrs. J. Carter and Co., Raynes Park, arranged a delightful spring terrace garden in flower and in grass. The lawn portion of the arrangement was ideal of its kind, while the massed beds of Crocus, of Hyacinths and Tulips were particularly fine. The background of coniferous and other trees and shrubs, with an effectively-planted rockery arrangement in the foreground, added a further charm to a work unmistakably beautiful and very suggestive as a whole.

Mr. J. Dickson, gardener to Adeline Duchess of Bedford, staged a very fine lot of Primula obconica, the strain being of a high order of merit.

A massed bank of Azaleas from Mr. L. R. Russell, Richmond, with its dark background of Palms, was one of the features of the show.

Miss Willmott, Warley Place, showed *Corylopsis multiflora*, a greenish yellow flowered species of merit.

Messrs. R. Gill and Sons, Falmouth, exhibited a few examples of *Primula Winteri* and a glorious bank of hybrid *Rhododendrons*. *Iris stylosa* was also charming in this exhibit.

Mr. Pulham, Elsenham, had a small rockery exhibit prettily arranged with alpine and shrubs. *Anemone Pulsatilla alba* was very good.

Mr. G. Reuthe, Keston, Kent, had a charming group of alpine and *Rhododendrons*, among which the *Saxifragas* were most beautiful. *Cyclamen*, hardy *Heaths* and the early *Narcissi* were all in pretty masses.

Messrs. R. W. Wallace and Co., Colchester, had a pretty rockery exhibit, arranging masses of *Primroses*, alpine, rare species of *Tulips* and the choice and new *Fritillaria imperialis chitralensis*.

Mr. H. Burnett, Guernsey, arranged one of his superb exhibits of *Carnations*, *White Wonder*, *Sultan*, *Mrs. Raphael* and other notable varieties being noted.

Bakers, Wolverhampton, had a pretty group of alpine and spring flowers, all being in good condition.

Messrs. J. Peed and Sons, West Norwood, S.E., exhibited alpine and *Crocuses*.

Messrs. Allwood Brothers arranged *Carnations* in bowls, the new *La Rayonnante*, *White Wonder* and *Geisha* (mauve) being admirably displayed.

Mr. H. Ellison, West Bromwich, had a pretty display of *Gerberas* in many shades of colour.

Messrs. William Cutbush and Sons, Highgate, N., exhibited a fine lot of shrubs in flower, also a superb gathering of *Carnations*.

The Burton Hardy Plant Company, Christchurch, arranged a rockery exhibit, planting it freely with the choicer alpine.

Messrs. H. B. May and Sons displayed *Clematises* of the best varieties in groups, also *Azaleas* and other plants. *Thunbergia grandiflora* was a notable beauty in blue-mauve.

Messrs. Thompson and Charman, nurserymen and landscape gardeners, of High Street, Bushey, Herts, erected a neat little rock garden, planted throughout with alpine flowers. Among the features of this exhibit were *Ranunculus creticus*, *Androsace Lageri* and *Corydalis densiflora*.

From the Guildford Hardy Plant Nursery came a meritorious collection of alpine in pots and many ornamental shrubs. Among the plants noted were *Polygala Chamebuxus* and *Primula denticulata*.

A grand lot of *Freeseas*, blooming in great profusion, were sent by Earl Lytton, Knebworth, Herts (gardener, Mr. H. Brotherston).

Messrs. Carter Page and Co., London Wall, E.C., had a bright and glorious display of *Narcissi*, *Tulips* and *Hyacinths*, all grown in boxes of fibre.

Messrs. Whitelegg and Page, Chislehurst, Kent, had a charming little rock garden tastefully planted throughout with *Aubrietias*, *Primulas* and the like.

Messrs. James Veitch and Sons, Limited, Chelsea, displayed a sumptuous bank of *Azaleas* in dwarf and half-standard examples. The plants were simply massed with the flowers, and arranged in conjunction with *Prunus*, *Wistaria*, and other things, made a most effective whole.

A beautiful corner group of flowering shrubs, chiefly *Camellias* and *Prunuses*, was staged by Messrs. William Paul and Son, Waltham Cross. It was a tastefully-arranged group, in which the double white and double pink *Peach* were shown to the very best advantage.

Messrs. W. Wells and Co., Limited, Merstham, had a glorious collection of *Carnations*, all up-to-date varieties. The new large white *Wodenethe*, sweet-scented and of splendid form, was shown in the height of perfection. Other notable varieties were *R. F. Felton*, *White Wonder*, *Pluto* (crimson) and *Merstham Beauty* (cherry red).

Mr. James Box, Lindfield, Sussex, had a pretty collection of alpine flowers, with ornamental and flowering shrubs in the background.

NARCISSUS COMMITTEE.

Present: E. A. Bowles, Esq. (chairman), Miss Willmott, and Messrs. A. R. Goodwin, F. Herbert Chapman, H. Smith, W. T. Ware, G. W. Leak, Joseph Jacob, A. M. Wilson, J. T. Bennett-Poe, H. A. Denison, G. H. Engleheart, P. R. Barr, W. A. Watts, C. F. Digby and C. H. Curtis (hon. secretary).

The work done by this committee will be reported in the Rev. Joseph Jacob's "Daffodil Notes" in our issue next week.

Messrs. Cartwright and Goodwin had a most interesting lot of *Daffodils*, *Circlet*, *Weardale Perfection*, *Mervyn*, *Long Tom*, *King Alfred*, *Glory of Noordwijk*, *Mme. de Graaff*, *Fairy*, *Lady M. Boscawen*, *Autocrat*, *Long-fellow* and others being well shown.

Mr. F. Herbert Chapman, Rye, showed a few vases of *Daffodils* in *Poeticus* and *Ajax* varieties, also some interesting triandrus hybrids.

Messrs. R. H. Bath, Limited, Wisbech, showed *Hyacinths*, *Narcissus*, *Crocuses* and *Tulips* grown in fibre, the plants being particularly well done.

Robert Sydenham, Limited, Birmingham, had *Lily of the Valley*, *Tulips* and *Jonquils* in fibre.

Mr. Christopher Bourne, Bletchley, showed a wonderful lot of *Daffodils* in many choice and beautiful sorts.

Messrs. Sutton and Sons, Reading, arranged a most effective table of *Hyacinths* in semi-circular groups to show the effect of colour-harmonies and contrasts. Blue and blush, deep blue and yellow, yellow and red, and two shades of blue were among the more conspicuous

COMPETITIVE CLASSES.

Class 3, eighteen *Hyacinths*, distinct: First, the Duke of Portland, Welbeck Abbey, Worksop (gardener, Mr. James Gibson). This exhibit contained magnificent spikes of *King Menelik* (purple), *King of the Blues*, *Moreno* (coral) and *Perle Brillante* (pale blue). Second, F. R. Dixon Nuttall, Esq., Ingleholme, Preston, Lancs (gardener, Mr. J. H. Barker); third, Lord Howard de Walden, Audley End, Saffron Walden (gardener, Mr. J. Vert). This class was very well contested.

Class 4, twelve *Hyacinths*, distinct: This also was a popular and well-fought class. The first prize went to A. Hanson, Esq., Liverpool, with magnificent, strong and beautifully-finished spikes; second, the Marquis of Salisbury, Hatfield, Herts (gardener, Mr. H. Prime); third, Lord Hillingdon, Wildernesse, Sevenoaks (gardener, Mr. J. Shelton).

Class 5, six *Hyacinths*, distinct: First, R. Morrison, Esq., Liverpool; second, C. E. S. Bishop, Esq., Norton Priory, near Chichester; third, the Earl of Lytton, Knebworth, Herts.

Class 6, four pans of *Hyacinths*, ten roots of one variety in each pan: In this class the Duke of Portland was again successful, carrying off the first prize with a truly grand collection; second, the Marquis of Salisbury; third, His Excellency the American Ambassador, Amptill, Beds (gardener, Mr. G. Mackinlay).

Class 7, collection of 100 *Hyacinths* in twenty named varieties: Messrs. R. and G. Cuthbert, Southgate, were the successful exhibitors in this class. The spikes shown were of first-rate quality. The same exhibitors carried off the first prize for 120 *Hyacinths* in twelve varieties in pans. These two classes were open to trade growers only, and the gold medal of the General Bulb Growers' Society of Haarlem was awarded in each class to the successful exhibitors.

Mr. Robert Sydenham's classes for bulbs grown in moss fibre attracted a good deal of interest, and competition was good.

Class 9, six single *Hyacinths* to be selected from a given list: First, Miss E. M. Rawlins, Northampton; second, Lady Tate, Streatham Common (gardener, Mr. W. Howe); third, Miss C. A. Michell, Cricklewood, N.W.

Class 10: Lady Tate was first for six vases of *Tulips* grown in fibre, followed by the Hon. Mrs. Guy Baring, Berkeley Square, W. The best varieties shown were *Prince of Austria*, *Keizerskroon* and *Duchesse de Parma*.

Class 11, six vases of *Narcissi* grown in fibre: First, Miss C. A. Michell, with capital bowls of *Emperor*, *White Lady* and *Lucifer*; second, Lady Tate; third, Miss E. M. Rawlins, Great Houghton Hall, Northampton.

NARCISSUS AND TULIP COMMITTEE'S AWARDS.

Silver-gilt Banksian Medal.—To Messrs. R. and G. Cuthbert, Southgate, for *Tulips*.

Silver Flora Medals.—To Mr. C. Bourne, Bletchley, for *Daffodils*; Messrs. Cartwright and Goodwin, Kidderminster, for *Daffodils*.

FLORAL COMMITTEE'S AWARDS.

Awards of Merit.—To *Azalea Blushing Bride*, from Messrs. Veitch, Chelsea; *Rhododendron Cornubia*, from Messrs. Gill, Falmouth; *Corylopsis multiflora*, from Miss Willmott, V.M.H.; and *Pteris Parkerii*, from Messrs. Parker, London, N.

Silver-gilt Flora Medals.—To Messrs. Carter, Raynes Park, for spring bulb garden; and Messrs. Veitch, Chelsea, for greenhouse plants and *Azalea indica*.

Silver-gilt Banksian Medals.—To Mr. L. R. Russell, Richmond, for *Azalea indica*; and Messrs. Sutton, Reading, for *Hyacinths*.

Silver Flora Medals.—To Mr. H. Burnett, Guernsey, for *Carnations*; Messrs. Cutbush, Highgate, for *Carnations*, *Hyacinths*, &c.; and Messrs. W. Paul, Waltham Cross, for flowering *Peaches* and *Almonds*.

Silver Banksian Medals.—To Messrs. Barr, Covent Garden, for hardy bulbous plants; Adeline Duchess of Bedford (gardener, Mr. J. Dickson), Rickmansworth, for *Primulas*; Mr. C. Elliott, Stevenage, for alpine; and Messrs. May, Edmonton, for *Ferns* and *Clematis*.

Bronze Flora Medals.—To Mr. C. Engelmann, Saffron Walden, for *Carnations*; and Messrs. S. Low, Enfield, for greenhouse plants and *Carnations*.

ORCHID COMMITTEE'S AWARDS.

Awards of Merit.—To *Dendrobium Golden Ray superba* (D. Othello Colmanæ × signatum aureum), from Sir Jeremiah Colman, Bart.; and *Odontoglossum Jasper*, from J. S. Moss, Esq., Waltham.

Gold Medal.—For a group, from Lieutenant-Colonel Sir George Holford, K.C.V.O.

Silver-gilt Flora Medal.—For a group, from Messrs. Armstrong and Brown.

Silver Banksian Medals.—For groups, from Messrs. James Cypher and Sons, Messrs. Hassall and Co., Messrs. Sander and Sons, Sir Jeremiah Colman, Bart., and Messrs. Stuart Low and Co.

Silver Flora Medal.—For a group, from Messrs. J. Veitch and Sons, Limited.

CHELMSFORD AND DISTRICT GARDENERS' ASSOCIATION.

THE tenth meeting of the winter session was held in the County Laboratories on Friday, the 1st inst. Mr. E. H. Christy, the president, presided, and about fifty members were present. Previous to the lecture an exhibition of forced bulbs was held. The flowers were very good, and included *Hyacinths*, *Tulips* and *Narcissus*. The following were the awards: First, Mr. Hunt; second, Mr. Rymer; third, Mr. Russell. Mr. F. W. Harvey, Editor of THE GARDEN, gave a lecture on "The Making of a Horticultural Journal." The lecturer

explained, with interest, the various stages through which a journal had to pass before it was ready for sale, and explained in detail such processes as type-setting and block-making, especially the art and process of printing coloured plates of flowers and fruits. The lecture was made exceedingly interesting, because Mr. Harvey brought with him specimens of blocks in their various stages of completion, also articles as corrected and ready for press, and examples of corrected proofs. A vote of thanks to the lecturer concluded the meeting.

United Horticultural Benefit and Provident Society.—The annual meeting of this society will be held at the Royal Horticultural Hall, Vincent Square, Westminster, S.W., on Monday, March 11, at 8 p.m. Mr. Charles H. Curtis will preside.

Perpetual Flowering Carnation Society.—Two exhibitions have been arranged for this year, to be held in the Royal Horticultural Hall, Vincent Square, S.W. The first will take place on March 21 and 22, and the winter show is fixed for December 3 and 4. A capital schedule has been drawn up, and there is every reason to anticipate a first-rate display of bloom at the spring show, which is now so rapidly approaching.

National Chrysanthemum Society.—The list of members, together with the schedule of prizes for this year, are now ready for distribution. The early autumn exhibition and the great autumn exhibition and fête are arranged for at the Crystal Palace, the former on October 2 and 3 and the latter on October 29, 30 and 31. The last exhibition of the year will be held at Essex Hall, Strand, on November 20. Copies of the schedule may be obtained from the secretary, Mr. R. A. Witty, 72, Savernake Road, Gospel Oak, London, N.W.

Examination of Employees in Public Parks.—The result of the Royal Horticultural Society's examination of employes in public parks, held in January of this year, has just been published. Forty-nine candidates entered, and of these seventeen secured places in the first class, seven in the second and sixteen in the third, leaving eight who failed to satisfy the minimum requirements of the examiners and one who was absent. The examiners report that the average quality of the written answers equals that of former years. The identification of specimens in the viva voce section was better, the names being generally given unhesitatingly and correctly. The first place was secured by Mr. F. J. Nash, 44, Meynell Road, Leicester.

The Development of Forestry.—The Right Hon. Walter Runciman, M.P., President of the Board of Agriculture and Fisheries, has appointed a Committee to advise the Board on matters relating to the development of forestry. References will be made to the Committee from time to time as occasion arises. The Committee will be asked in the first instance: (1) To consider and advise upon proposals for a forestry survey; (2) to draw up plans for experiments in silviculture and to report upon questions relating to the selection and laying out of forestal demonstration areas; (3) to advise as to the provision required for the instruction of woodmen. The Committee is constituted as follows: Sir Stafford Howard, K.C.B. (chairman), Mr. F. D. Williams-Drummond, Sir S. Eardley-Wilmot, K.C.I.E., the Right Hon. R. C. Munro-Ferguson, M.P., Lieutenant-Colonel D. Prain, C.M.G., C.I.E., F.R.S., Mr. E. R. Pratt (president of the Royal English Arboricultural Society), Professor Sir W. Schlich, K.C.I.E., F.R.S., Professor William Somerville, D.Sc., and the Hon. Arthur L. Stanley. Mr. R. L. Robinson, of the Board of Agriculture and Fisheries, will act as secretary.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Hyacinths Flowering Early.—It may be interesting to record the early date at which ordinary bedding Hyacinths are commencing to flower outdoors this year. In several gardens in Essex we noticed white and blue varieties fully open on Sunday last, the 10th inst., notwithstanding the fact that in one garden the bulbs were not planted until early December. The gardens in question are not very sheltered, and the locality is not usually an early one. The old double Daffodil has been out for several weeks, and Golden Spur has just opened; but other varieties are still in the bud stage.

The Rock Garden at Edinburgh Royal Botanic Gardens.—Those who were acquainted with the old rock garden at the Edinburgh Royal Botanic Gardens can best appreciate the changes which have taken place there and the great extensions of the cultivation of alpine flowers which have been carried out under Professor Bayley Balfour, the Regius Keeper of the gardens. In lieu of the formal rockwork, bold arrangements of rockwork have been substituted and the alpine plants in blocks of a kind. These extensions are yet in progress, and a still further improvement is noticeable, although some critics appear to think that the grass part is being too much encroached upon. The rock garden is one of the most popular parts of the gardens, and Professor Bayley Balfour is always adding some good new or rare plants, which are of great interest to cultivators of such flowers.

Forsythias and Chionodoxas.—A very pretty combination was noted recently by the use of *Chionodoxa Luciliae sardensis* as a groundwork for *Forsythia suspensa*, the golden flowers of the latter plant serving as an effective contrast for the rich blue carpet of *Chionodoxa*. This and other combinations of a similar character are well worth copying in gardens where they do not already exist, for both plants are inexpensive, and by growing the two together, no harm is done to either. The *Chionodoxas* have the advantage of perfecting their growth at an early date; therefore the leaves may be removed early and a surface-dressing of manure applied to the shrubs when necessary about the time they are breaking into vigorous growth. It is surprising how bulbs like *Chionodoxas* increase in numbers when growing beneath shrubs, and it is possible about every third year to fork the beds over and pick out many of the larger bulbs to use elsewhere, and still leave sufficient in the ground to create a good display the following spring. This and other *Chionodoxas* may also be used with good effect in combination with red-stemmed kinds of Dogwood.

Trees Suitable for Experimental Forestry.

The current issue of the *Kew Bulletin* contains an interesting article by Mr. W. Dallimore on trees suitable for experimental forestry. The article is the third of a series, the others being published last year, and is devoted to American conifers. Until quite recently these trees have only been planted for ornamental purposes in this country; hence it is difficult to determine their value for forestry. Several, notably the Deciduous Cypress, *Taxodium distichum*, and Lawson's Cypress, *Cupressus lawsoniana*, will, no doubt, prove suitable for planting under certain conditions, and all these conifers are well worth consideration by those who are intending to plant forest trees. The *Kew Bulletin* is published by Wymans, Limited, price 3d.

The Italian Maple.—Among the various Maples which bear showy flowers, *Acer opulifolium*, the Italian Maple, is one of the most conspicuous, for it blossoms in March and produces its clusters of yellow flowers with the greatest freedom. A native of Europe, it grows into a medium-sized tree 25 feet to 40 feet high, with a rounded, wide-spreading head. The leaves are less deeply lobed than those of the Sycamore, and their shape has been likened to that of the leaves of the Guelder Rose. The flowers are borne, twenty or thirty together, in axillary and terminal clusters, each blossom being slightly pendent from a slender stalk an inch long. *A. opulifolium* is an excellent shade tree suitable for planting on a lawn; but perhaps its best position is as a specimen tree in parkland. This and other species might well be more widely employed in our public parks.

A Beautiful Japanese Shrub.—A fine bush of *Stachyurus præcox* is at the present time covered with drooping racemes of pale yellow flowers in the small enclosed garden which surrounds King William's Temple at Kew. It is easily one of the most distinct and ornamental of the numerous March-flowering shrubs, and it is a pity that it is not more generally grown. Belonging to the Order Ternstroemiaceæ, it differs widely from many other genera included in the Order—*Camellia*, *Stuartia* and *Cleyera*, for instance. The deciduous leaves are more or less ovate in shape, and are produced on rather slender, reddish-barked branches. The inflorescences are from the side buds on the previous year's shoots. They form during early autumn, and the flowers commence to open any time between the middle of February and the end of March, according to weather conditions. The racemes, though often but 2½ inches or 3 inches long, sometimes exceed 4 inches in length, with the small yellow flowers arranged closely together. *S. præcox* appears to be at home in light soil such as will grow Heaths well, for the specimen alluded to is growing in companionship with certain Heaths and Heath-like shrubs.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Annual Larkspurs.—In reply to "An Amateur" in your issue for March 9, page 118, I may say that "the old-fashioned, tall, single-flowered Larkspurs," of which she is so greatly enamoured, grow with me as freely as weeds, and have so grown for the past twenty years. If "An Amateur" will favour me with her name and address, I will send her a few plants some time next month, when they begin to show themselves and get large enough for removal.—W. BOOTH, *Howsham, Lincoln.*

Roses Making Early Growth.—I do not know when Roses have been so forward in growth as they are this year, and the new shoots seemed to burst out quite suddenly. Already some are asking whether it would not be wise to prune at once; but others, the more prudent old Rose-growers, prefer to "bide a wee," because they know we have to experience the Blackthorn winter yet, and if pruned now the dormant eyes will not remain so very long. The work of pruning ramblers might be got on with. Do not forget to cut the lateral growths back severely, the very weak ones to one or two eyes, and the stronger laterals longer in proportion. After doing this, retie the plants and spread them out as much as possible to admit light.—P.

Colour - Schemes for Flower-Beds.—During the next month many will exercise their minds as to what shall be grown in certain beds and what shall be associated or kept distinct. It might be helpful if now and again a reader of THE GARDEN would send any simple but effective arrangement of plants in bed or border to the Editor for publication, if he thought it worth while to do so. Of course, I do not here mean what is usually termed "the summer bedding." I think one of the most glorious shows (and yet free from garishness) I have ever seen was a border of Sutton's Pink Beauty Sweet William, among which were planted three shades of Canterbury Bells, white, lavender and purple. The effect was truly exquisite. Let anyone try it. We are to repeat the experiment next year. Another pretty effect is obtained by sowing *Linum rubrum* among a fair-sized patch of the common garden Musk. The groundwork of these little yellow flowers improves the appearance of the *Linums*, while it also helps to keep the roots of the latter cool and moist, a condition they appreciate in the hot weather. Finally, another handsome bed is obtained by carpeting a bed of *Diplacus glutinosus* (often known as *Mimulus*) with white, pale yellow, blue and lavender *Violas*. The large coppery flowers of this greenhouse shrub make a most pleasing contrast to the *Violas*.—C. TURNER, *Highgate*. [We shall at all times be pleased to receive notes on beautiful plant combinations, and we hope other readers will follow Mr. Turner's example.—ED.]

Saxifraga longifolia.—I do not think it would be possible to conceive anything finer than the handsome inflorescence of the above plant appearing in the illustration on page 103 of THE GARDEN for March 2. Judged by the diameter of the rosette and the magnitude of the spike as given in inches, it constitutes somewhat of a record, of which your correspondent M. E. Heinrich might be justly proud. Not only is there mere size depicted, but that degree of proportion in the spike which

is quite rare. For example, a large number of plants at their flowering exhibit a sparseness at the base of the stem, few, if any, lateral spikelets appearing at this point. In the plant seen in the picture the lowest flowering sprays spread out and crowd down upon the rosette of leaves, and from this point to its summit the inflorescence is a well-formed, well-graduated column which must have been goodly to look upon. One cannot but congratulate your correspondent on having flowered so fine an example, although he appears to be somewhat sad in having to part with it as the result of so good a flowering. Mention is made of the plants flowering after "eight years' growth," while lower down it is stated that most of the plants flower "at a much younger age." Seedlings of this *Saxifraga*, like all other seedlings, vary in their early growth and development, some running away to a precocious flowering, and others remaining for years without making any progress. The greatest sluggards are the collected plants that are more than half grown when collected, and such as these often remain stationary for a year or two, and finally give but a moderately good account of themselves when they flower. This, of course, is the direct outcome of root sacrifice when the plants are dug or torn up in their native home, the veriest stumps remaining, often enough, when received.—E. H. JENKINS.

A MIRACLE.

Some little bulbs, all dry and round,
Were buried in the cold brown ground,
And there, almost forgotten, lay
Through many a bitter winter's day.
Unseen, unheeded, still they grew;
Till spring returning, yet anew,
When through the soil at first were seen
Some tiny, tender spears of green.
Then, suddenly, there burst to view
The flowers, of lovely shape and hue.
Behold! a miracle! and true.

C. M. P. D.

Primula denticulata.—A good deal more attention might be given to the cultivation of this hardy Himalayan *Primula*. As a spring-flowering plant it is invaluable in the early border, and the effect when grown *en masse* in good soil enriched by manure is very beautiful. It is a robust grower and sends up strong, erect stems, carrying large rounded heads of many sessile flowers densely crowded together. The flowers come up before the leaves, which are flat. The plants are sometimes slightly covered with farina. A few pence will purchase enough seed to raise hundreds of plants, and the grower will be rewarded by having in flower the following year plants bearing heads of flowers ranging in colour through all shades of lilac to the purest white. Some of them will equal in appearance the so-called named varieties. *P. Henryi* and *P. pulcherrima* advertised in catalogues are only strong-growing, good-coloured forms of *denticulata*. The individual flowers of *erosa* (Fortune's Primrose) are stalked. It is a very inferior *Primula* for garden decoration. The leaves of *cashmeriana* are longer, more convex, and paler green in colour than those of *denticulata*. The whole plant, practically speaking, is densely covered with a white mealy powder, which adds much to its beauty. The catalogued *cashmeriana* Ruby is specially fine, one of the most lovely-coloured spring flowers I know, and sure to fill everyone with admiration when once seen. *Cashmeriana alba* has a poor appearance compared

with *denticulata alba*. The white, apart from being not so good, does not show up so well against the densely-powdered leaves as in the latter, which are very slightly, if at all, farinose, and of a much deeper shade of green. *Cashmeriana* × *rosea* have produced a hybrid called *Sübtitzii*, which bears lilac flowers instead of the exquisite red of *rosea*. The name alone seems quite sufficient to deter anyone from ordering it.—JOHN MACWATT, *Morelands, Duns*.

The Value of Hop Manure.—"A. D.," on page 103, March 2 issue, raises a point of very great importance to the small amateur anent the shortage of animal manure and its substitutes. Two years ago, having to obtain manure in a hurry, I ordered 10wt. of Wakeley's Hop Manure (which, incidentally, arrived the same night), and I found the stuff clean to handle and economical so far as it went. My personal view is that you could use it with advantage more freely than stated in the directions, with good results. The material is damp, but not sodden, so that you do not pay for an excessive amount of water, and undoubtedly it is a basis of Hop waste treated with manurial substances. Treating the subject broadly, the amateur should leave no likely quarter unturned before forsaking natural manures. His dairyman and any of his tradesmen who keep horses (and the cycle carrier and motor are narrowing the circle each year) should be approached, and in small neighbourhoods I know that children eagerly earn a few pence by the aid of a bucket and shovel. This material is raw, and may be dangerous unless mixed with milder ingredients, so that it behoves all town gardeners to husband their supplies of green rubbish to tone down the whole. It cannot be too firmly insisted that a pit into which all soft rubbish can be pitched, sprinkled generously with soot and unslaked lime to sweeten it, and turned occasionally, will eke out the manure supply in a wonderful manner. Add to this horse or cow manure in small quantities when obtainable, and you have a sound article of great value for use when trenching or bastard-trenching. For top-dressing I can think of nothing, other than old hot-bed manure, to equal Wakeley's Hop Manure, and for ladies it is ideal, being clean and pleasant in use.—H. R. GREEN, *Holm Cot, Buckingham Road, South Woodford*.

—For twelve years I have experimented with spent Hops as received from the brewery, and I consider that in many respects they are superior to farmyard manure. I have proved by analysis that they contain about an equal percentage of nitrogen, phosphates and potash, and, being much lighter in texture, they are more easily incorporated and remain longer in the soil than either horse or cow manure, especially so in light, sandy soil. They also retain the moisture better. Unless the advertised Hop manures are deprived of moisture and strengthened by the addition of concentrated fertilisers, I fail to see that they can be better than the ordinary spent Hops. Under the Feeding and Fertilizers Act every purchaser of any patent manure can demand that the seller shall give him a guaranteed analysis showing the actual percentages of nitrogen, phosphates and potash contained in the article as sold; not the percentages as contained in the material after the moisture has been driven off. Brewers' spent Hops contain in their natural state from 70 per cent. to 85 per cent. of moisture. Even hydraulic pressure does not reduce this below 40 per cent.—J. L.

Coleus thyrsoideus.—I saw a nice batch of this now-popular plant in an old Scottish garden conservatory the other day, and was gratified to see it among older winter-flowering plants in such a flourishing condition. In this garden it is found very useful for winter, and in a place where flowers and plants for decoration are much required its value was very apparent. I can recollect when it was introduced in 1897 and the pleasure with which I first observed its fine blue flowers on good plants. I think we have improved in its cultivation since then, and the plants I saw in this old garden were of exceptional quality.—M. D.

The Moccasin Flower.—In the autumn of 1908 I took from the open ground a plant of *Cypripedium spectabile* with the intention of sending it to a flower show in the following year, and planted it in a wooden box 24 inches by 15 inches by 8 inches deep. The soil was a calcareous loam, with a fair admixture of peat and leaf-mould, and copious waterings were given during dry weather. The plant had then five crowns. The wooden box seemed to suit it admirably, for it grew at once at an amazing rate, the fleshy rootlets appearing in all the chinks of the box where the wood had shrunk. In winter the box was left outside, and was merely covered with a layer of Pine boughs. In 1909 there came nine flowering stems; 1910, thirteen; and last summer, nineteen, of which two bore twin flowers. Last season the photograph was taken, and it is easy to see that the plant is in robust health. It is to be regretted that so beautiful a subject, and one so easily grown, is still so comparatively rare in gardens. We so often hear the question asked, "What shall I plant in my shady garden?" Why! here is something for you to suit such a position admirably.—E. HEINRICH, *Planegg, near Munich, Bavaria.*

A Pretty Greenhouse Plant.—

How seldom do we see any reference now to the *Diosmas*, graceful South African flowering plants, which have been for many years in cultivation! Quite recently I came across a nice batch of the elegant *Diosma ericoides*, one of the prettiest of the genus, and one which has been in cultivation since 1756. As a decorative plant for the conservatory and greenhouse in the early months it is invaluable, as it harmonises well with the other plants of the time, and the foliage is always acceptable, the fragrance also appealing to a good number of people. This species is well named *ericoides*, from the Heath-like appearance of the foliage. It is very graceful indeed, while in February and onwards the small white flowers, with a little tinge of red, add to its beauty. The plants I saw recently were in the conservatory, and were well grown and about three feet high in small pots. In association with *Cinerarias*, *Camellias*, winter flowering *Begonias*, *Lilium longiflorum Harrisii* and other subjects, they helped to make a good conservatory highly attractive.—A. M. D.

Saxifraga longifolia.—I was much impressed by the appearance of this Saxifrage in the excellent illustration in your issue of March 2, page 103. For a period of about ten years I had charge of a fine collection of Saxifrages, and I can confidently recommend readers of *THE GARDEN* to cultivate more of these plants. They are chiefly regarded as rockery plants, but nearly all mine were grown in borders as a groundwork to *Magnolias* and flowering shrubs. The effect was charming. The flowers of many varieties last a long time when cut and placed in vases.—SHAMROCK.

Lilacs on their Own Roots.—"H. P.," page 102, in March 2 issue, refers to Lilacs doing well on their own roots. I, too, have noticed many plants that have flowered very freely on their own roots.



THE MOCCASIN FLOWER (*CYPRIPEDIUM SPECTABILE*) IN A BAVARIAN GARDEN.

The suckers, when a few years old, flower as well as the branches from the main stem. I must say, however, that if plants on their own roots are allowed to grow without certain training or restriction, they become straggly in appearance, as some branches will grow almost horizontally.—B.

FORTHCOMING EVENTS.

March 19. — Royal Horticultural Society's Meeting and Exhibition at Vincent Square, Westminster. Lecture at 3 p.m. by Mr. H. B. May, on "Ferns."

March 21. — Perpetual Flowering Carnation Society's Show at Vincent Square (two days). Manchester Orchid Society's Meeting.

March 22.—Oldham Spring Show (two days).

THE ROSE GARDEN.

PRUNING ROSES FOR BIG DISPLAYS.

AS the time for pruning has arrived, it may not be out of place to ventilate the subject of moderate pruning of Roses for garden decoration a little, as it is a very great stumbling-block with many amateurs. There are people who are fond of going to the extreme, some by cutting their Roses down to the ground every year, others in just snipping off the tips of the shoots and nothing more. Now, if we can obtain grand Roses from huge plants of *Maréchal Niel*, why is it necessary to cut down, say, *Maman Cochet*, almost to the ground-line? Should we not rather plant such Roses against fences or walls where they may develop more growth, as seems to be their natural desire? I have seen huge plants of this Rose upon a wall, and even in beds, where they were left practically unpruned, and the growth has surprised me. There have also been fewer of the split or divided blooms we constantly meet with upon hard-pruned plants.

I know I shall be told that if we did not prune such Roses the frost would do the work for us. Of course, I fully admit that we run this risk, but am still of opinion that a much more rational system in pruning our garden Roses, at least, might prevail.

Now, I do not wish to be misunderstood. Even with garden Roses, or Roses planted for decoration, it is essential to keep up a supply of vigorous basal growths, and this can only be obtained by removing annually some of the old growths quite down to their base. I have seen huge bushes of *Grace Darling* and *Mme. Abel Chatenay* attain a height of 6 feet to 7 feet, quite gawky-looking objects, that gave direct evidence of neglect in this respect, because, if taken in hand earlier, they would have been nice shapely bushes and with a vigour of basal growth that betokened a healthy state. What I do condemn is the reckless cutting back of the fine ripened growths produced last year. Instead of pruning these hard, they

should be retained from 10 inches to 12 inches long in the case of Roses of the *Caroline Testout* type, but all decrepit growth, of course, should be cut away.

Many Roses, like *La France*, plainly resent the knife, and I would advise all who have hitherto failed with this Rose to give it a rest-cure as far as pruning is concerned.

Another point I should like to emphasise is that Roses of the *J. B. Clark*, *Hugh Dickson*, *Mrs. Stewart Clark* and *Gloire Lyonnaise* type are best grown as pillars, and they need plenty of space. *J. B. Clark* is a terror when growing in a Rose-bed. I have had to dig it out more than once, for it completely usurps all the surrounding space. But such a grand Rose has its uses, and it should

be grown upon trellis-work formed with Bamboo canes or against poles. I give these few ideas in the hope that some amateurs may relate their experiences. I do not invite exhibitors to do so, because I know what they would say; but, thank goodness, Roses are not grown for exhibition only. P.

THE FLOWER GARDEN.

A BEAUTIFUL JUNO IRIS.

THE beautiful Iris stenophylla belongs to that charming group of early-flowering species designated by the name of Juno Irises. Since the beginning of February it has been producing a succession of flowers in the Alpine House at Kew, and at the end of the month there were several in full beauty on a sunny border. Very welcome are these little bulbous plants at this time of the year, when there is little else in flower than Snowdrops and Winter Aconites. At the present time several members of this family are in bloom, including the beautiful yellow-flowered

in Asia Minor, whence we get so many of our early-flowering bulbs.

The culture of this and the others mentioned presents no great difficulty. A warm position on a south border, slightly raised, planted in light, loamy soil that is well drained, suits them best, while it is an advantage to mix plenty of pulverised bricks and old mortar rubbish with the soil. All Irises of the Juno group produce thick, fleshy, permanent roots, which serve the purpose of store-houses of food. They penetrate deeply into the soil, so that an open, well-drained medium is necessary for their well-being. For culture in pots they make charming subjects, and can be seen to better advantage with the shelter of a cold house. W. I.

SWEET PEA NOTES.

Plants in Frames.—There will be wide differences between the Sweet Peas now in frames. The autumn-sown seeds will, of course, have grown into splendid plants, and, could one be perfectly sure of the weather, they would be better in their permanent positions than where they are now; but "discretion is the better part of valour" very often, and I would remind over-eager planters of the

been remarkably good this season, so far as my experience goes, and it is the exception rather than the rule to find a blank, so that the prospects up to the present are decidedly pleasing and satisfactory. Let these youngsters be grown as hard as possible. If the pots were placed in a warm greenhouse to encourage vegetation, a system with which I fully agree, the earlier the seedlings can be transferred to frames the better, as they can be given more fresh air therein, and, in addition to that, the liability of becoming drawn towards the light is substantially reduced. The soil in the pots ought to be kept regularly moist, and great care must be exercised in this matter, as extremes in either direction cause a check to advancement, from which the plants fail, in some instances, fully to recover.

Outdoor Sowing.—The man who wants an abundance of Sweet Peas for cutting cannot do better than sow seeds out of doors between the present date and the middle of April. Neither autumn nor spring sowing in pots or boxes under glass will bring him a scrap more pleasure; on the contrary, there is an undeniable possibility that the results from such a system will be vastly inferior. From outdoor-raised plants one may not secure blooms of quite such large size and the stems will not all be 20 inches or more in length, but, after all, does that matter? Does the lady of the house measure each standard with a view to securing the biggest when flowers are being cut to adorn the dinner-table or the drawing-room? Does the same lady hanker after stems 18 inches or 2 feet in length? My decided answer to both of these questions is "no." The essentials for decorative purposes are freshness, artistic poise of the blooms on the stems, beautiful colour and a stalk varying from 10 inches to 15 inches in length. Given these, the capable decorator will make a charming arrangement. Then, again, do rows or clumps of pot-raised plants create a finer display in the garden? Can the mutilated specimens lashed securely to hop poles compare in beauty to a line or a clump of plants from outdoor-sown seeds? Once more I am forced to answer in the negative. The amateur should provide deeply and thoroughly cultivated soil that is not excessively rich, and sow his seeds in rows or clumps, according to his fancy in that matter, and it is almost certain that he will be delighted with the results. There are still thousands of amateurs who never think of exhibiting, so the charm of the Sweet Pea as a decorative garden flower is not yet likely to be lost. In sowing, set the seeds 2 inches or 3 inches apart on the firm bottom of shallow drills, covering the black seeds 1 inch or so and the white and spotted wrinkled seeds scarcely at all. When the seedlings appear, and it is clear which are the most favourable plants for retention, thin out the others so that the plants stand 6 inches or 8 inches asunder for blooming. The row will become a glorious hedge and the clump will be a clump in every sense of the word, and from the plants bushels of flowers will be cut before the season is over. It is for such purposes as this that the old-fashioned varieties so keenly admired by a recent writer in THE GARDEN are most particularly adapted.

HORACE J. WRIGHT.

CROCUSES IN GRASSLAND.

THE Crocus is one of the most accommodating bulbous plants for planting in grassland, and at the same time one of the most charming. In the first place, it continues to grow vigorously



ONE OF THE JUNO IRISES: I. STENOPHYLLA.

I. Danfordiæ, the golden-netted I. reticulata and its earlier purple-flowered variety Krelagei, I. Tauri, with violet purple flowers, the falls of which are marked with golden lines, and the subject of this note and illustration.

I. stenophylla, sometimes known as I. Helldreichii, has lovely large flowers nearly four inches across, borne on a stem between three inches and four inches high. The standards are of a soft blue shade, while the falls are intense blue in colour, bordered with white. Its native habitat is

disasters which happened last year in the early days of April. By all means stand the pots out of doors where the plants have a modicum of protection from cold, where the birds can be prevented from topping the shoots too frequently, and where they will make harder and sturdier progress than in the frame, which has to be occasionally shut for the benefit of other occupants.

There will be, too, the smaller seedlings from January and February sowings to take into consideration. The germination of seeds has

for many years, even where a dense turf exists, a condition which is fatal to the well-being of the Snowdrop and various other bulbs of small stature; then it finishes its growth at an early date, which is beneficial in various ways. First, by completing its growth early there is little possibility of drought interfering with its development, an important item when growing on tree-covered banks. Secondly, the leaves may be mown off with the grass about the middle of May, and if necessary the grass can be mown with a machine from that period onwards. Thirdly, they blossom earlier than the Narcissi, and thus help the advance of spring, while their comparatively low stature fits them for positions where coarser-growing subjects would be out of place.

On Mounds and Banks.—Perhaps the most suitable positions for plantations of Crocus are grassy banks or slight elevations which terminate a vista, for in such cases the blaze of colour made by the flowers can be seen from a considerable distance, the effect being better than when the bulbs have been planted on level ground. After the selection of the position, however, care must be taken in the actual planting if the effect is to be a pleasing one. Anything in the nature of formality must be avoided, for hard lines are a great defect. So is the method of planting in circular clumps to be condemned, for that is quite as bad as having straight lines. The more irregular a plantation can be made the better. Let large clumps be broken up by small patches of bulbs or by open spaces of grass, with an odd Crocus here and there, and about the margins let odd bulbs and small clusters stray some distance from the main body. All such arrangements tend to create a free and natural effect, which is really the idea to be aimed at.

Colour Effects.—The question of colour needs some consideration. Large stretches of orange-coloured varieties are very effective planted alone, while orange and white varieties also give good results. Whites, lilacs and pale purples provide a good display, but deep purple varieties are less useful. It is only in certain lights that they are seen at their best, and then they are not very noticeable from a distance.

Planting in Grass.—Various methods have been recommended for planting Crocuses in grass; but after trying many ways, the most satisfactory one has been found to be to remove the turf in September, fork over the ground, rake off an inch or so of the surface soil, distribute the bulbs, replace the soil, and then returf the ground. Should the weather be dry at the time, a good watering may follow and a light roller be passed over the ground. By this means little damage is done to the turf, and a better opportunity occurs of placing the bulbs in an irregular and pleasing manner than when other planting methods are adopted. For informal planting under trees, on banks and grassy mounds, the Crocus has no equal in the early days of spring.

THE FRUIT GARDEN.

THE APPLE: ITS VARIETIES AND THEIR CULTIVATION.

(Continued from page 87.)

AS there are so many good sorts to select from, it is no easy task to choose, say, the best dozen varieties to grow for market, and it is probable that no two growers would select the same sorts. Be that as it may, I have had the advantage during late years of supplementing my own experience in the matter by that of

James Grieve and Ellison's Orange, the latter a variety recently given an award of merit by the Royal Horticultural Society. Both succeed well as standards or bushes. James Grieve is now well known as one of the best-flavoured varieties of its season, but it lacks the attractive colouring of some of its rivals. One of the parents of Apple Ellison's Orange is Cox's Orange Pippin, and the raiser is that old, distinguished and ardent pomologist, the Rev. C. C. Ellison, M.A., of The Manse, Bracebridge, Lincoln. I have known this Apple for twenty years, and can vouch for its excellences of growth, flavour and good cropping qualities. It is ripe earlier than Cox's Orange



CROCUSES IN THE GRASS AT KEW. NOTE THEIR INFORMAL GROUPING.

others; hence I have confidence in recommending the following selection for the consideration of planters. I have already mentioned the old Devonshire Quarrenden as a good early sort to grow, especially as standards.

Beauty of Bath.—This is, perhaps, the handsomest of all early Apples, the colour being bright red on the sunny side, with white spots permeating the whole. The flavour is refreshing and brisk. It bears freely when the tree is once established, but not so freely as some on young trees.

Worcester Pearmain.—Following closely on the above varieties comes this splendid market sort, admitted to be one of the best paying early Apples we have. The tree is a healthy grower, succeeding well everywhere where it is given a chance. It is a constant and heavy bearer, its colour is most attractive—a bright, cheerful red when ripe—and its flavour is pleasant and refreshing. The two named in the next paragraph are early sorts of more recent introduction, both of exceptional merit, which I think growers would do well to give a trial.

Pippin. All early Apples should be sold as soon as gathered, or, what perhaps would be better, sold on the trees, as is frequently done.

Cox's Orange Pippin.—As an autumn and early winter dessert Apple we have nothing approaching Cox's Orange Pippin in point of quality or flavour, and where the soil is good and of fine depth, and the position not too cold, it should be largely planted. But where the soil is not good or too heavy, and the position inclined to be damp and cold, it would be a mistake to plant this variety for sale, as its growth would be weak and the tree liable to suffer from canker. As a substitute for it under such adverse conditions, I would recommend

Allington Pippin.—This is a larger fruit and as handsome when ripe as Cox's Orange Pippin, and in flavour it ranks among the best. The tree is hardy and of robust growth, succeeding very well in the Northern Counties. It is a consistent and heavy cropper. I should like to bracket another variety with this, of equal merit as a midwinter and fairly late Apple, namely,

Christmas Pearmain.—This proved a great success with me at Windsor. It is not quite so large as

Allington Pippin, but is as handsome when ripe, and of the true Pearmain shape. Like the other, it is a heavy and consistent bearer, and both are notable in being precocious bearers, quite young trees of each sort bearing heavy crops. There is a new dessert Apple (in season from November to February) which I think growers for market will do well to make a note of and give a fair trial to, namely,

William Crump.—This is a cross between Cox's Orange Pippin and Worcester Pearmain. It is larger than the latter variety, but possesses its brightness of colour, and Cox's Orange Pippin is represented in the colour of its flesh and its excellent flavour.

Blenheim Orange.—This grand old variety has, perhaps, never been seen in finer condition of growth or of better quality and flavour than it was last year. At fruit exhibitions generally the variety is admissible both as dessert and cooking, and in my opinion deservedly so. It is, perhaps, more suitable for orchard planting as standard trees, and those who are in a position to plant a large orchard of it on suitable land will never regret doing so. The tree lives to be old and attains an immense size. As a late dessert Apple for market purposes it would be hard to find a better all-round sort than

Barnack Beauty.—This succeeds well as a standard or bush, being of compact growth. It is also hardy.

Culinary Varieties.

Early Victoria.—For a first-early market sort this is hard to beat. It is a handsome pale Codlin of vigorous growth, very prolific, and in season at the end of July.

Potts' Seedling is another valuable early sort, but the tree cankers in some soils. To succeed the above, for September and October there is nothing better than

Grenadier.—This is among the largest of the Codlins, of strong constitution, and one of the heaviest of croppers.

Lord Derby.—As a midwinter variety, taking it all in all, this has few rivals and no superiors as a market fruit at this time. The sort is a strong grower, very hardy, and succeeds well in cold districts. It is a splendid cooker, and when quite ripe is not to be despised for dessert. It is among the largest in size.

Lane's Prince Albert.—This Apple is too well known to need describing. The only thing which can be said against it is that the habit of growth of the tree is of rather a scrambling nature.

Newton Wonder.—This is said to be a cross between Wellington and Blenheim Orange. It has all the good qualities of the former as regards colour and quality of flesh, and in respect to colour of skin, size and noble appearance it holds its own against the latter. The tree is an exceptionally sturdy grower, and a prolific bearer.

Bramley's Seedling.—This sort has been speaking eloquently on its own behalf for a great number

of years by the enormous crops of magnificent fruit it has been yielding and the good prices it has commanded in the market. Like several other good things, it had many detractors for a long time, but it is not too much to say that at the present time it is the most popular market variety of all. This and Newton Wonder are specially suitable for planting in hedges of fields. O. THOMAS, V.M.H.

TREES AND SHRUBS.

FLOWERING SHRUBS OF EARLY SPRING.

It is a strange chance that one of the earliest of our flowering shrubs, namely, the February

time, a plant beloved of cottage folk and very sweet of scent. It does best in a strong loam, when its close, strong growth and wealth of pink bloom in earliest spring, and its crowds of scarlet berries later in the year, give it a double season of beauty and garden value.

The Forsythias soon follow; viridissima as a shapely upright bush, suspensa as a thing of bold and free growth, whose long flower-laden branches are flung about with a kind of careless grace that has a special charm so early in the year. For those who cannot make up their minds whether they prefer the compact Forsythia viridissima or the loosely-shaped F. suspensa, there is a hybrid form coming between the two, named F. intermedia. It is well to group with the Forsythias the pretty

Spiræa Thunbergi. They flower at the same time and mingle charmingly. The double-flowered Spiræa prunifolia follows closely, the long sprays, which in autumn will be almost scarlet of leaf, being thickly set with a close array of the little blooms like small double Daisies.

The deciduous Magnolias are among the most important of the spring-blooming shrubs. Against a wall the large white flowers of M. conspicua are grand objects in March, but it is well to keep some protecting material at hand, for March is often cruel, and after hot sun in day-time, 8° or 10° of frost at night will deface the lovely blooms with patches of brown decay. In April, even in the open shrubbery, M. stellata, best of early-blooming bushes, stands smothered with its myriads of starry blossoms of purest white before the leaves are formed, soon to be followed by M. soulangeana (see illustration on page 135), a bush of more important growth and large flower, whose outside is tinged with red-purple.

April and May are the months of Apple blossom; and not of Apple blossom alone, but of the greater number of the beautiful flowering shrubs that are closely related to those many fruit trees—indeed, nearly all the fruit trees we have—that are members of the great Rose tribe.

Earliest of all, the Almond shows its tender pink bloom against the hard, deep blue of the skies of

spring, and with it come the many varieties of the Japanese Quince (Pyrus japonica) in varied colourings, from purest white through faint pink to a full rosy scarlet; these colourings passing onward to the splendid deep red of Waterer's Knaphill Scarlet, a variety of the highest merit. We have reason to be thankful to some of our best nurserymen for their work in producing these capital varieties, though, no doubt, much may yet be done. The smaller but still more abundantly-flowered Pyrus Maulei is also yielding beautiful varieties, while its splendid masses of orange-coloured fruit give it a second season of conspicuous beauty.

The Blackthorn (Prunus spinosa) of our hedges is a delightful shrub, and only needs the added



A PROFUSELY-FLOWERED SPRAY OF THE FALSE CHERRY (PRUNUS PSEUDO-CERASUS).

blooming Chimonanthus fragrans, should produce the sweetest-smelling flowers (the large Magnolia grandiflora only excepted) of any hardy shrub or tree of all the year. But so it is, and the fragrant little blooms of modest colouring are truly welcome as the heralds of the coming host of spring-flowering shrubs.

Probably the next to bloom will be Andromeda floribunda, a neat, dark-leaved peat shrub crowded with white flower-spikes. It has the strange habit of forming the flower-bud in August; by September it looks so forward that one thinks it must be just about to burst into bloom, but so it remains till it actually flowers towards the end of March. Daphne Mezereum is in bloom at about the same

bounty of the double bloom to be one of the best of garden ornaments. Lovely are the double Cherries and the double-flowered Plums, both white and rose coloured, and they are delightful not only as dainty bushes in the garden, but also as some of the best of shrubs for slight forcing or growing in the cool greenhouse. This same thing may be said for the double Peaches, of which there are now several varieties of great merit. How seldom is *Prunus triloba* to be seen in a garden, and yet it is one of the very best of early-flowering shrubs. It enjoys a place against a wall, where year after year it becomes loaded with its pretty pink bloom. Some of the earliest of the shrubby *Spiræas*, such as *S. Thunbergi* and the double-flowered *S. prunifolia*, are also well worthy of a place against a wall, for our summers are not quite long and hot enough to ripen the tips of the year's shoots when the bush stands in the open, so that the arching spray of bloom is cut short a little way from its end, and instead of finishing with bloom and bud to the very point, there is generally a sudden stop and a bit of dead stick beyond.

One of the best known of the flowering shrubs of this class is the Japanese *Pyrus Malus floribunda*, now in several varieties, and none is better worth a place, either at the extreme edge of a shrub clump or in some quiet detached spot upon grass. Its half-weeping habit is singularly graceful, and a well-grown specimen will cover a large space, the branches bending over mainly to the ground. If the space below it is wanted, as may often happen in a small garden, by gradually removing the lower branches it can be made to take a small tree form, which acquires a high degree of pictorial value as it advances in age, while the head can also be shaped at will by shortening the ends of the branches. Two others of the rosaceous flowering shrubs or small trees should not be overlooked, namely, the Snowy *Mespilus* (*Amelanchier*) and the Bird Cherry (*Prunus Padus*), beautiful either in shrubbery or thin woodland.

Daphne pontica, flowering in May, would be well worth planting if it were for its fragrance only; but besides this delightful quality the quantity of greenish-tinted yellow bloom and bright yellowish green foliage and its compact bushy habit make it one of the brightest and best of small shrubs, and especially suitable for upper portions and frontiers of bold rockery. In May also we have the earlier of the Brooms, the wild yellow, which for its early bloom should not be denied a place on the outskirts of the garden, and its partly crimson variety, *Cytisus andreanus*, also *C. præcox*, of tenderest buttery yellow colour, forerunner of the rather later white Broom of Portugal (*C. albus*) and the Spanish that blooms in late summer. G. Jekyll.

COLOURED PLATE.
PLATE 1447.

TUBEROUS BEGONIAS AS BASKET PLANTS.

VISITORS to the various exhibitions held during the summer months cannot fail to be struck with the magnificent displays of tuberous Begonias so freely contributed by Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath. Their success with these charming flowers is proverbial, and the Twerton strain is remarkable, both among the single and double varieties, for the size, shape and colouring of the flowers, as well as for the bold, erect manner in which they are borne. Owing to this prominent characteristic, the blossoms,

desirable kinds: *Alba plena fimbriata*, white; *Alice Manning*, yellow; *Mrs. Bilkey*, salmon orange; and *Marie Bouchet*, light red. This last is an old Continental variety, but it has just the habit of the others.

The gardener who has to furnish a number of hanging baskets during the summer months will look with favour upon these Begonias, as they are not only in themselves remarkably effective, but also supply a decided break-away from the subjects usually employed for the purpose. It will be noted that the flowers are comparatively small, but are borne in great profusion, a feature which stands them in good stead when grown in suspended baskets, as the very large and heavy flowers would under such conditions be more liable to break off, and consequently leave a naked space of considerable extent. The varieties illustrated are all of a double or semi-double character, for



MAGNOLIA SOULANGEANA, ONE OF THE MOST BEAUTIFUL OF SPRING-FLOWERING TREES.

when looked at from above, display their charms to the greatest advantage.

A New Departure.—A class, however, to which Messrs. Blackmore and Langdon have devoted a good deal of attention within recent years is in direct contrast to those just referred to, for the habit of growth is loose and pendulous and the flowers droop. Varieties such as these need to occupy an elevated position in order to see them at their best. Owing to this they are admirably adapted for growing in suspended baskets, and it gives us much pleasure in the accompanying coloured plate to show their varied charms when treated in this way.

Some Good Varieties.—The three varieties represented in the coloured plate are good and distinct, but there are other very beautiful forms. Besides these we noted last season in Messrs. Blackmore and Langdon's nursery the following

the single flowers shown in the plate are the female blossoms, the doubles being the males.

When about to make up baskets of these Begonias, it will be found a considerable advantage to start the tubers in small pots, as when they have commenced to grow, the plants can be arranged better, and, furthermore, the roots are then fully active and will soon take possession of the rooting medium with which the basket is filled. A frequent mistake made with baskets that are intended to be suspended is that the space between the wires is too great, and consequently some of the soil is apt to drop through. Where large flakes of moss can be obtained, and the soil available is of a good fibrous nature, this is not so important a matter; still, it is often a decided drawback. Even when baskets have this failing, it can be remedied by working a little more wire round them.

THE GREENHOUSE.

BEAUTIFUL GREENHOUSE BULBOUS PLANTS.

(NERINES.)

I AM glad to write a few notes on the Nerine, because I think it is a plant that is likely to come to the front and receive a good deal of attention now that its cultivation is beginning to be properly understood. A group of Nerines shown by Mr. Elwes at the Royal Horticultural Hall last autumn (I believe at the end of October) constituted one of the most beautiful exhibits I think I have ever seen at this now famous rendezvous of the plant-lover. As I stood admiring them, a prominent floriculturist said to me, "Daffodils in the spring, Nerines in the autumn; these are

may be obtained ready potted in August or September, and here let it be mentioned that too frequent repotting is a common cause of ill-success in flowering the plants properly. When I was looking at some large mother bulbs full of flower last year, I remember the grower computed that they had been for seven years in the same pots. Small pots are advisable, most of the plants shown by Mr. Elwes last autumn being, I think, in 3-inch pots, and the usual potting compost may be used, but lime in any form is disliked by the plants. During the winter they should have plenty of water to promote free foliage growth, and as soon as flowering ceases, frequent applications of very weak cow-manure-water are beneficial in the way of building up good flowering bulbs for next year. About April or May, or, in fact, when the foliage shows signs of dying off, watering should be discontinued, and I generally dry off my bulbs thoroughly in a warm part of the greenhouse,

many of the new and fine hybrids raised by Mr. Elwes and others are not yet in commerce, increase from offsets being in most cases somewhat slow; but to the amateur who has the time and patience, raising plants from seed is a most enjoyable and fascinating pastime, and I hope to go into the methods of this on another occasion.

Rye, Sussex.

F. HERBERT CHAPMAN.

THE KITCHEN GARDEN.

ROOT CROPS.

BRIEF CULTURAL NOTES.

(Continued from page 112.)

Celeriac.—This vegetable is increasing in popularity, and deservedly so, for it entails but little trouble in its culture. Seed should be sown at this season, any time this month is suitable, and raised in a gentle heat and transplanted before being planted in the open ground 18 inches apart and 2 feet between the rows. Keep the surface soil aerated during the growing season, and as soon as frosts appear, lift the whole of the crop and store in sand or ashes.

Chicory.—One of our most useful winter salads, and easily forced; therefore a quantity of roots should be grown each year according to the demand. Sow the seed in drills 1 foot apart, and thin out when nicely above the soil to 9 inches apart. Keep the crop free from weeds by occasional hoeings.

Artichokes (Jerusalem).—Another vegetable often highly esteemed in midwinter, and one quite easy to produce, as the tubers will grow almost anywhere. The growths are frequently used to hide unsightly buildings, &c. The tubers are best planted in February and buried 6 inches deep and 2 feet apart. When growth commences, earth up the soil as for Potatoes and keep the ground free from weeds. Little other attention will be required. The white variety we find much preferable to the old purple-skinned sort, the flavour being better and the tubers, owing to their better shape, more economical.

Artichokes (Chinese).—Not by any means commonly met with, the above, however, add variety to our winter vegetables, and are easily grown. Plant the tubers in well-prepared ground 3 inches deep and 12 inches apart, allowing 18 inches between the rows.

Salsify.—Sow seed of this vegetable about the beginning of April in well-prepared ground in shallow drills 15 inches apart. Partially thin out when well above the soil, thinning them finally a week or two after to 1 foot apart.

Scorzonera.—This, like the foregoing, is not met with frequently, but is much appreciated by some, and certainly should be included in gardens where space permits. Sow seed towards the middle of May and treat similarly to the aforementioned.

EDWIN BECKETT,
Aldenham House Gardens, Elstree, Herts.



NERINE UNDULATA IN THE BOTANIC GARDENS AT GLASNEVIN.

my delights among bulbous plants," and it was a remark that may be well understood and appreciated by those who grow both.

I am a great lover and a considerable grower of the Daffodil myself, and, until I found out the Nerine, my autumns, after the excitement of the spring, used to be very dull indeed. Now, and especially now that my three year old seedlings are beginning to come into flower, all this is changed, and the latter months of the year are greatly brightened by my collection of Nerine species and varieties. To this collection are now beginning to be added my own seedlings, which, naturally, constitute a source of interest to their raiser.

Cultural Hints.—The Nerine is not a difficult plant to grow when a few simple requisite details are mastered. The bulbs may be purchased in a dormant state in summer and potted up, but they

transferring the pots outside in August or September to get the benefit of any early autumn showers that are going, and rehousing them at the beginning of October, or, in fact, as soon as buds begin to show.

The Best Varieties.—With regard to varieties, *N. Fothergillii* is usually the first to flower, coming into bloom, as a rule, in September. Its upright and well-displayed umbel of brilliant scarlet flowers makes it an exceedingly effective plant, and with the sun on it it sparkles like gold, this, indeed, being a pretty attribute of all the brightly-coloured Nerines. Later on come *N. flexuosa alba*, *N. undulata* (the subject of the illustration), *N. corusca*, *N. Plantii* and several others, among which should be particularly mentioned the large flowered pink species, *N. Bowdenii*, which is hardier than some, and may be trusted in the outside border in favoured localities. A great

GARDENING FOR BEGINNERS.

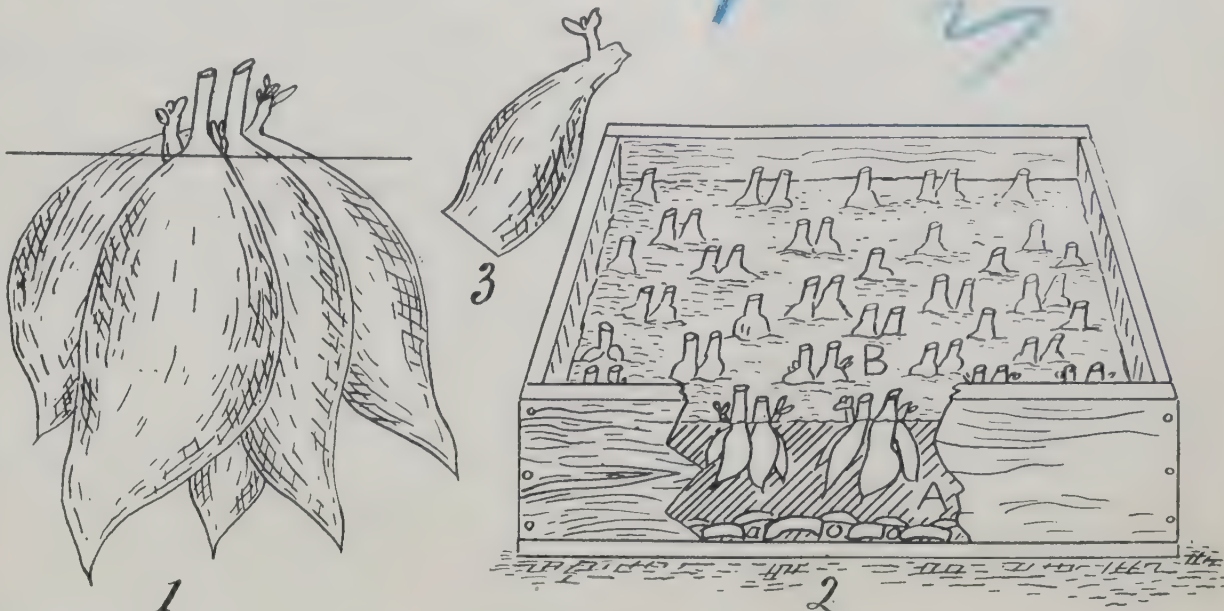
PROPAGATING AND PLANTING DAHLIAS.

DAHLIAS are very popular plants and form a distinct feature in the garden. They are really not difficult to grow if care is taken to raise strong young plants. If weakened by improper treatment while in their first stages of growth, the plants rarely turn out well during the summer months. The storing of the tubers in the winter-time will not tax the resources of any establishment if there is ordinary accommodation, such as dry rooms, cellars and outhouses, from which frost can be excluded. All tubers brought out from damp cellars or storerooms must be very carefully examined, as fungus sometimes grows round the base of the old stem, and it then kills the new bud or buds, which would, in a healthy tuber, grow and form young shoots fit for cuttings. I may here mention that the crowns of all old tubers, when stored, should be covered with pure sand.

How to Procure Healthy Cuttings.—Old tubers should be taken, similar to the clump shown in Fig. 1, and placed carefully in rather deep boxes, as shown in Fig. 2. The horizontal line in Fig. 1 denotes the depth to bury the tubers in the soil in the boxes. Put a few crocks over the holes in the bottom of the boxes, and use as a compost loam, sifted, two parts; leaf-soil, one part; and sand, one part. A, drainage; B, tubers. At this season good positions for the starting of the new growths are in a frame on a mild hot-bed, on a stage in a warm greenhouse, or on a high shelf near the glass in an intermediate temperature. If the first shoots which appear are very spindly, remove them and wait for the second batch. When those forming the second batch are rooted, a third lot will probably be available, and, if the varieties are scarce, further propagation may take place.

Division of Roots.—Fig. 3 shows a detached part of a cluster of tubers. The extreme point is cut off simply to admit of the tuber being well placed in a rather small flower-pot.

How to Insert Cuttings and Tubers.—Fig. 4 shows a young shoot detached from the old tuber, with a heel portion adhering. If the cultivator



PREPARATIONS FOR OBTAINING DAHLIA CUTTINGS AND THE MODE OF INCREASE BY DIVISION OF ROOTS.

wishes to have more cuttings from the same tubers, he must not cut with a heel, but sever the stem 1 inch away from the tuber.

Prepare the cutting by severing it immediately below a joint and remove the two basal leaves, as denoted by the three dark lines drawn on the stem and leaf-stalks in Fig. 4. Insert the cutting with plenty of coarse sand round the stem and base, as shown in Fig. 5. Use a good sandy compost, but not one with manure in it. Fig. 6 shows how the cultivator must pot a divided tuber.

Treatment of Cuttings in Frames.—Guard against excessive moisture, as it would cause the cuttings to decay at the soil-level. Admit air on fine days, shade from bright sunshine, and be careful not to overwater. Plunge the pots to their rims in sifted ashes, soil or Cocoanut fibre.

Hardening and Planting Out.—Directly the cuttings are rooted they must be exposed to more sunshine and air, this to be a gradual process. A slight frost would cripple the plants. Fig. 7 shows how a young plant must be put out in its flowering quarters. The crocks used for drainage

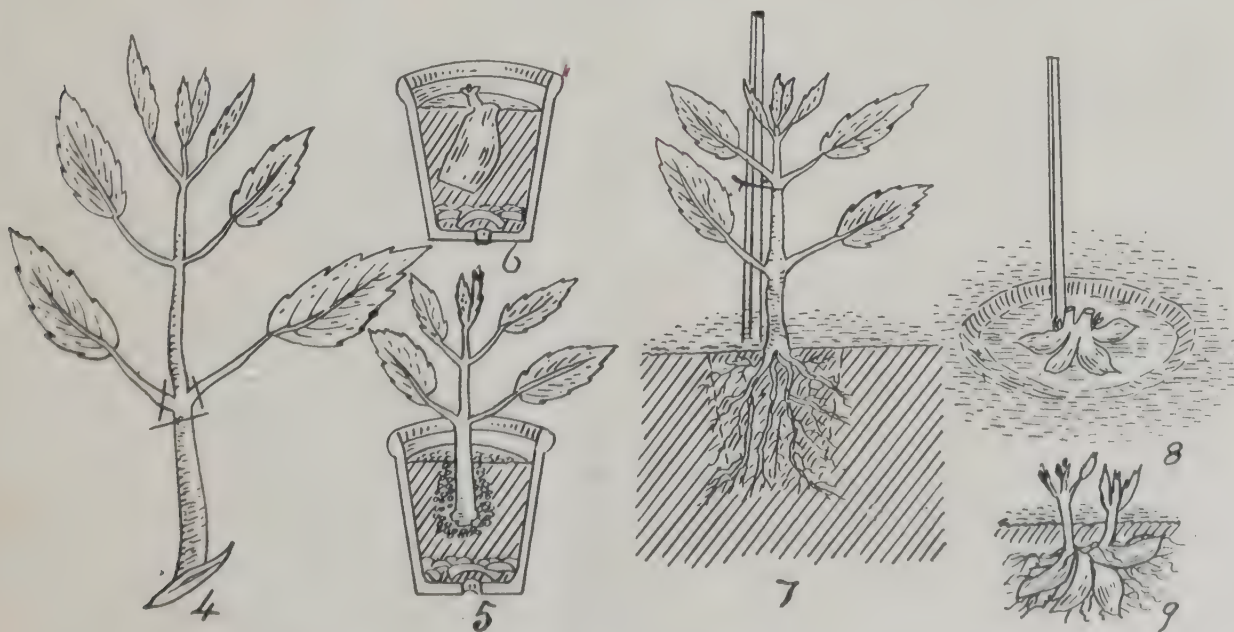
should be removed and the roots carefully spread out. Fig. 8 depicts how an old cluster of tubers may be planted, and Fig. 9 shows the resultant new growths. It is well to reduce the young shoots to two. Old tubers should be planted several inches deep in well-manured, trenched ground in April. Young plants from cuttings must not be put out before the end of May. In the North, June 8 will be early enough. Put in stakes to old tubers when the latter are planted. Surround the young shoots with sifted coal-ashes. G. G.

HOW TO POT AND GROW CANNAS.

THESE plants have become very popular during the past few years, both for bedding-out purposes and for cultivation in pots for the furnishing of greenhouses and conservatories. The flowers are large and richly coloured, and the leaves are exceptionally fine, combining with the flowers to make very handsome plants. The flowering period extends from May to September when grown in pots.

The roots are easily forced into growth, but it is not at all necessary to subject them to a high temperature. The natural growth is much stronger than that which is forced; but from the present time a warm frame or an ordinary greenhouse temperature will suffice.

Some roots may be divided into several parts, each of the latter having an "eye" or bud, so that the stock is easily increased. Use a compost of equal parts of loam and leaf-soil, with a nice quantity of sand to keep the soil porous. Put each root singly in a pot just large enough to contain the root and a small quantity of compost. Very little drainage is needed at the first potting, as the plant must be repotted before it becomes at all pot-bound. Apply water with judgment, increasing the quantity and frequency as the roots multiply. When in their flowering pots and pot-bound a little, commence to feed at first with weak doses of clear soot-water; then give diluted manure-water, and also some approved artificials when the flower-spikes first appear. These plants look well put out in beds in the flower garden from June to September. They should be plunged in their pots. SHAMROCK.



METHOD OF TAKING CUTTINGS AND THE SUBSEQUENT TREATMENT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Border Chrysanthemums.—Where the stools of these were lifted and either potted or covered with soil in a cold frame, excellent sturdy cuttings are now obtainable. These will root freely if placed round the edges of 3-inch pots in a sandy compost and stood in a cold frame. Keep them quite close for a time.

Lobelia cardinalis.—If stored in boxes throughout the winter and kept moderately dry, this plant may now be taken out, divided up, potted into 3-inch pots, and started in a house with slight warmth. Where the stock is low or deteriorating, seed may now be sown.

Bedding Geraniums that were potted singly and placed in a warm house as recommended will soon need transferring to a cooler position and more air given them.

Lawns.—Where these have become worn, due to excessive wet or other causes, a sprinkling of lawn seed applied now will remedy the defect. When the ground is sufficiently dry, rake over with an iron rake and sow the seed. Scatter a little finely-sifted soil over and roll in. Protect from the birds.

Hardy Fruit Garden.

Alpine Strawberries are easily raised from seed, which can be sown now and raised in a cold frame.

Figs.—The pruning of these may now be proceeded with, except in very cold localities. Cut out as much old wood as possible without robbing the tree of too much growth. Figs often-times make too much growth at the expense of fruit, and this can be remedied by confining the roots by means of a rough wall. Afford temporary protection again in the event of very severe weather, as the trees are not perfectly hardy.

Pruning and Nailing.—This work must be completed as quickly as possible. Young trees that were planted and just loosely secured will by now have settled at the roots and may be trained into position.

Indoor Plants.

Celosias.—Seed may be sown now of these distinctly beautiful plants in a warm house. To grow them perfectly they must not be subjected to any check, such as becoming root-bound, before being potted on.

Gloxinias.—The tubers, if not already potted, should be so treated without delay. The compost needed is an open, sandy one containing some peat. Water sparingly for a time, but keep the stage well damped between the pots and shade them from bright sun.

Salvia splendens.—Take cuttings now of this for producing plants to flower in the late autumn. Insert the cuttings round a small pot, and root in a warm house.

Eupatoriums.—These, too, make fine plants for late flowering, and require treating much the same way as the above. In the earliest stages a warm house is needed, but throughout the summer the plants may be stood or plunged out of doors.

Solanum Capsicastrum.—When well berried, this has a fine effect during the winter months, and proves an accommodating subject for the greenhouse. Sow the seed now thinly and raise in a gentle heat.

Orchid-Houses.

The Cool House will now need some shade during the spells of sun, but this should only be of a temporary character, so that the plants are not deprived of any light.

Cœlogyne cristata.—These should have sufficient water to keep the pseudo-bulbs plump. Specimens after the flowering is past will be much benefited by having some of the old compost pricked out and new material pricked into its place and surfaced with some live sphagnum.

General Remarks.—With the lengthening days and increase in warmth more moisture will be needed where the occupants are commencing growth. Whenever favourable, admit a little air either through the top ventilators or the bottom

ones under the stage, and with plenty of piping a little may be left on at the bottom all night on the leeward side.

The Shrubberies.

The Early Spring affords an opportunity for giving these a little attention, and their appearance is much improved by the necessary attention to pruning, placing new stakes to those that need them and forking up the ground between the shrubs.

Early-Flowering Subjects.—A selection of shrubs should contain something of interest at all seasons, if possible, and none is appreciated greater than the earliest comers. Interesting just now are Cornus Mas and its varieties, the latter being elegantly-marked foliage plants later; Daphnes, including D. Mezereum and the white variety; Prunus davidiana and the variety alba, the earliest of the Prunus family. Nuttallia cerasiformis, commonly known as the Osoberry, forms a neat bush much resembling a Flowering Currant, but its flowering period is considerably in advance of this. Erica carnea, when massed in a bed, forms a pleasing sight.

The Rose Garden.

Pruning.—Owing to the exceptional weather experienced in the South, growth this year is very forward, and the hardier Roses will need pruning without delay. The Hybrid Perpetuals may be dealt with first and pruned fairly hard. Much depends upon the habit of the plant in question as regards treatment. The section named may be cut back within a few buds of the base of last year's growth. Any weak wood is best cut out entirely. The Hybrid Teas may be dealt with next, and, lastly, the Teas; but these must not be pruned too severely. An excellent rule to observe generally is, the weaker the growth the less pruning necessary.

Rosa rubrifolia.—This is a fine Rose where space permits of it being trained in a large bed and allowed to grow over old tree stumps. The foliage is most attractive at all seasons, and so are also the fruits. Thin out the old wood annually to prevent growth becoming too congested.

Rosa Moyesii.—This is a new species of comparatively recent introduction and well worth growing; it makes a good-shaped bush of free growth. The flowers are large and of a beautiful shade of colour, and the fruits are exceptionally fine and handsome.

Rosa nitida.—This is a pretty subject for the shrubberies, and to see it to the best advantage it requires the old growths to be pegged down. The foliage is of a pleasing hue, and the shoots in winter are bright red in colour.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Vegetable Garden.

Soil Cultivation.—As opportunity offers, dig or fork in a shallow manner trenched ground and crush all clods.

Potatoes.—Plant earlies already started on a warm border, as well as in an open quarter of the garden, and follow with midseason and autumn sorts. Early planting is now generally adopted for all sections.

Turnips.—A small sowing of Early Milan may be made on a sheltered border, but it cannot be depended on to succeed. Turnip-tops will now be a valuable asset, but in the North they are not so much valued as they ought to be.

The Fruit Garden.

Standard Fruits.—Break the clods left after digging and smooth the surfaces neatly.

Orchards.—Grass that was roughly surfaced with compost in winter should now be neatly smoothed, stones raked off, and rolled to make the sward level for scythes.

Young Trees.—Those planted last autumn are now at the right stage to prune. Unless provided at the time of planting with numerous fibrous roots, the growths will be feeble, and perhaps it would be preferable not to prune till autumn.

Grafting.—Apples may be grafted now, but there is no reason for haste with these. For

old trees to be regrafted, rind-grafting is as good a method as any. It is a great mistake to grub up healthy old trees, several years being gained by cutting them down and regrafting with selected sorts. The scions should in every case be secured against accidental breakage by some simple method.

The Greenhouse.

Marguerites.—These are all valuable pot plants, and cuttings inserted now may be grown on into fine plants for autumn and winter.

Aster Climax.—This is a splendid greenhouse plant for the end of October and November. Strike cuttings now, and later plant them in the reserve garden 18 inches apart, to be lifted and potted in October.

Chrysanthemums.—Cuttings rooted in boxes are ready to transfer to 4-inch pots. I use for drainage only a little leaf-soil, and pot very firmly, so that grown cool they stand for ten or twelve weeks in these. If plants have been allowed to become drawn, it is better to pinch them well back after ten days or so than to allow them to grow leggy and unsatisfactorily.

Cypripedium insigne.—This is a suitable time to report this easily-grown Orchid. It succeeds in a light, fibrous, turfy loam, with the addition of a little dry cow-manure rubbed fine. Our plants are repotted once in two years, and are grown in vineries shaded by the Vines. For some time after repotting exercise the utmost caution in applying water.

Climbers.—Dipladenias, Bougainvillea glabra and Allamandas should be pruned hard back, the soil previously being rather dry and kept on the dry side till growth recommences, when, if in pots, they must be repotted, the larger plants having a portion of the old soil and roots removed previous to repotting. Stephanotis should be thinned and the leaves and stems thoroughly cleaned.

Trees and Shrubs.

Willows.—Cut these over. I prefer to prune under the surface, the new growths springing freely from underground and presenting a nicer appearance than when ugly stubs are left above ground.

Dogwoods.—These, too, should be cut back now. They do not break so freely as Willows, and so a compromise must be made, only cutting below the surface every three or four years, and in the intervening years pruning above ground.

Prunus Pissardii.—Those grown as cut-backs should also be operated upon, being careful not to cut below the junction with the stock. This plant, after being pruned, should have a fair quantity of rotted cow-manure applied as a dressing, in order at once to cause a vigorous growth and intensify its colour.

The Flower Garden.

Soot.—This is a valuable material for dressing Carnations and many other flowers at this season.

Asters.—Scarce varieties should now be broken up into pieces, retaining for each one or two shoots with a few roots attached.

Larkspurs.—Sow seed of Emperor and Stock-flowered varieties in boxes for transplanting in quite a small state. Sown out of doors in Scotland, they do not flower till too late for effect. Azure Blue Emperor is one of the most beautiful of the dwarf section. Rocket Larkspurs are quite early enough sown in the open in April.

Clematises.—A great many of these must be pruned at once, preserving as much of the old wood of the Jackmanii section as possible where they are grown on high walls. Montana, which flowers in the course of a few weeks, must not be touched meanwhile. Any of the herbaceous section not yet cut back should also be pruned now. See that climbing sorts are firmly secured.

Mesembryanthemum cordifolium variegatum. A good form of this is valuable for carpeting, and this is the proper time to strike enough plants for that purpose. The cuttings require special treatment. Prepare as many boxes as required, put in a light compost with a surfacing of sand, dibble in short tips 2 inches apart, stand the boxes in a heated structure exposed to the sun, and apply no water till roots are formed. We do not lose three in a thousand by this method.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Azalea Blushing Bride.—The varietal name here given is somewhat suggestive of a distinct and pleasing colour that appealed to all. It is rather difficult to define in words the exact shade as seen in the plants shown, our conception of it being palest rose pink of a refined and beautiful tone. The individual flowers are large, semi-double and widely opened; hence the variety is of the decorative order from all points of view. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Rhododendron Cornubia.—A scarlet-crimson-flowered variety of the *R. arboreum* set, having resulted from the crossing of *R. Shilsonii* and *R. arboreum*. The flowers are shortly tubed, the heads compact and of a showy description. In the outdoor garden at the present time in sheltered places this would be most effective. Exhibited by Messrs. R. Gill and Sons, Falmouth.

Corylopsis multiflora.—A really good and useful addition to this small genera of deciduous hardy shrubs, the plant producing the twig-like, outwardly-inclined branches of the Hazel, from which depend racemose bunches of yellowy green flowers in Ribes-like clusters. Apart from the fact of its hardiness and its early flowering, the greatest attribute of the new-comer is its marked fragrance, and from this point alone it will undoubtedly prove a great gain to British gardens. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Pteris Parkeri.—A green-leaved variety which from the firmness of its texture and good growth promises well from the commercial as well as the decorative standpoint. Exhibited by Messrs. Parker and Co.

Dendrobium Golden Ray superba.—A delightful addition to this showy genus. The sepals and petals are of golden hue, tipped with rosy pink. The lip has a conspicuously dark central eye. Parentage: *D. Othello Colmanæ* × *D. signatum aureum*. Shown by Sir Jeremiah Colman, Bart.

Odontoglossum Jasper.—A flower of exquisite form and of pinkish hue, with darker spots. Parentage: *O. amabile* × *O. crispum*. Shown by J. S. Moss, Esq., Waltham.

The foregoing plants were shown before the Royal Horticultural Society on March 5, when the awards were made.

DAFFODILS AT VINCENT SQUARE.

MARCH 5 AND 6.

SPRING BULBS were present, but they were hardly there in sufficient numbers to warrant this particular show taking the title it does. I should like to see the major portion of the hall filled with them, and all the other flowers, for once in a way, take a decided "back seat." Hyacinths, it is true, were to the fore; but neither Tulips nor Daffodils were as numerous as their utility and importance demand. Should these lines meet the eye of any of the Royal Horticultural Society's powers that be, I would ask them if nothing could be devised to alter this and to make this particular show a characteristic one. I should like to see every Tuesday allocated to some special flower or flowers, e.g., Tulip

Tuesday, Delphinium Tuesday, Flowering Shrub Tuesday. It would be an interesting and attractive departure, and, I think, a sound policy. But enough. I am writing about Daffodils. My first remark is that there were not so many groups as we had last year. I regret this very much, for every year I am realising more and more what a Klondyke of good things for early pot work we have in the Narcissus tribe.

To mention some that are "nuggets" in their decorative value under glass, I would name Victoria, princeps, Golden Spur, obvallaris, Emperor, King Alfred, Weardale Perfection, Eye-bright, Blackwell, Seagull, Southern Star, Treasure Trove, Ben Jonson, W. P. Milner (pots), Autocrat, Fairy Queen, Campernelle Jonquils (especially the variety *rugulosus*) and many of those lovely big Leedsii's of which Messrs. Cartwright and Goodwin's Long Tom is a pleasing example. I grow a fair number of these latter, and this spring I have made a start in testing them. But there is always someone before you. I lately paid Mr. Walter T. Ware a Daffodil visit, and saw some fine things; but nothing impressed me more than his advocacy of these same "giants" for the same purpose, and as he has given them two or three years' trial, *he knows*. Some varieties are such good doers and quick to increase that the time cannot be far distant when they will be low enough in price to enable some to be so grown. They will not all be, of course, those flawless show beauties like Empire and Patrician; but you can take my word for it they will be all that anyone, bar the show people, need wish for.

Groups.—Only two groups were awarded medals—those of Messrs. Cartwright and Goodwin and Mr. C. Bourne, who each received a silver Flora. Partly this means that 1911 has told its tale and that all but the Trumpets have suffered, and partly that the standard has been put up a hole higher. I always like the way Cartwright and Goodwin "stage." Their head man, Mr. Schneider, manages and arranges the plants very well. I never saw a better lot than when I paid their nursery a visit a few days before the show. Weardale Perfection, Mervyn, Bennett-Poë and Circlet were among the best. Seeing them again at the hall, my good opinion was confirmed, and as they were beautifully set up, they formed a capital group. Eyebright, Northern Light (a very pretty Barri), Matthew Arnold, Fairy, Red and Gold (a good bit of colour, one of Copeland's doubles, of fairly symmetrical form), Mrs. H. J. Veitch and a few charming pots of W. P. Milner were very nice indeed. Mr. Christopher Bourne (silver Flora) had undoubtedly the flower of the show in his attractive Helios, a giant Barri with a similar relation to the old conspicuous that White Queen has to our well-tried friends Mrs. Langtry or Minnie Hume. It has a good stiff, well set-up over-lapping perianth of a rich butter yellow, $4\frac{3}{4}$ inches in diameter, and a good-shaped orange yellow cup, with a nicely-curved edge, measuring 1 inch (length) by $1\frac{1}{2}$ inches, the whole combination forming an exceptionally fine flower. Below was a single flower of Golden King, a capital thing for "showing," with both trumpet and perianth of a good deep yellow. I am sure exhibitors ought to keep their eyes on this. As shown here it was on the small side; but I think I remember seeing it larger last year.

A remarkable vase of the shapely White Queen was one of Mr. Bourne's best things, and he had several others of the same type, such as Pioneer and Sister, all very nice and pleasing. Once more

I claim this exhibit as a confirmation of my views on the giant Leedsii's suitability for pots. Lady de Bathe is an example of the Lady Margaret Boscawen and Brigadier style, with a rather pointed perianth, but with a less violent colour contrast between it and the cup. There were several fine unnamed red-edged cups. I heard that a large one named Sinbad was frequently nibbled at by would-be buyers of the stock in the course of the two days.

It is a great thing when we can get a Poet that will never get wingy, but will keep its shape. George Herbert bids fair to do this. It was as good at the end as at the beginning. It has a delicious perianth, not quite flat, but not so undulating as in Almira— $2\frac{1}{2}$ inches in diameter and with a rimmed eye three-quarters of an inch wide. Stephens Phillips is another new one of the paler-eyed type which is now being introduced. A pretty little artist's flower is Dewdrop, a pendulous Leedsii with a pale lemon cup, edged apricot. Other nice things on this stand were Circlet, Castile, Sunrise, Dorothy Kingsmill and Incognita.

Messrs. Barr and Sons had a few standard varieties, such as King Alfred, Viscountess Falmouth (medium-sized Leedsii), Fairy Queen, Constellation and the lovely Santa Maria. They also staged some single-bloom seedlings, among which were one or two pretty good yellow trumpets. Mr. Herbert Chapman's little lot were chiefly notable for two perfectly lovely triandrus hybrids of the purest white. The largest, Madonna had a perianth $3\frac{1}{2}$ inches across, and a longish cup seven-eighths of an inch by 1 inch wide. The other, Alabaster, was equally lovely, but not quite so large and with a wider cup. I hear all these do well in pots; but in this matter I cannot yet speak from personal experience. Ethelbert was small compared with flowers grown outside, but it was a gem—the perianth is not quite flat, but of a slightly wavy surface—milk white, and it has a pretty orange-edged cup. Mr. Thomas Stevenson was looking at the group when I came up, and he pointed it out to me as *the* flower that appealed to him most. I suppose he liked the Countess Spencer-like wave in the perianth. So do I when it is not overdone. I hope to refer next week in my notes to some other flowers, and also to say a word about Cuthbert's fine exhibit of early Tulips. JOSEPH JACOB.

LEGAL POINT.

Landlord and Tenant: Garden (Kendal).—A tenant is entitled to the exclusive possession of the premises till his tenancy terminates. During the continuance of the tenancy the landlord has no right, without the tenant's consent, to enter and cultivate the garden, unless a power to do so is reserved. An elaborately-drawn lease often makes express provision on the subject, and for the exhibition of a board that the premises are to let. The tenant has no power to remove the Raspberry canes, &c. He is entitled to gather his crops and cut the Rhubarb. Although he cannot remove, he may be entitled to some trifling compensation. Presuming that there was no agreement in writing that the premises should be treated as a market-garden, so as to bring the Agricultural Holdings Act into play, yet the tenant could fall back on the Allotments and Cottage Gardens (Compensation for Crops) Act, 1887, and obtain compensation for crops, including fruit, growing upon the holding in the ordinary course of cultivation, and for manure applied in anticipation of a

future crop. His claim would also extend to any fruit trees and fruit bushes planted by him with the previous consent in writing of the landlord.—
BARRISTER.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

ROMNEYA COULTERI (M. C. S.).—Your plant of *Romneya Coulteri*, which has been injured by frost, ought to be cut down to the ground-line at once. It is hardly likely that the stock has been injured. It ought to be cleared of the protective material at once, otherwise the young shoots will be injured as they begin to grow. Clear away the whole of the covering and scatter a few dry leaves over the plant. If shoots are pushing their way above ground, cover the clumps with a hand-light at night when there is danger of frost; but be careful to remove it during the daytime, for it is a bad plan to coddle this plant any more than is absolutely necessary. When the shoots become too large to be protected by a hand-light, erect four stakes around the plant and protect with a double layer of fish-netting each night until all danger of frost is past.

BORDER CHRYSANTHEMUMS AND ASPARAGUS (Gibson).—The best soil for the Chrysanthemums would be a mixture of fibrous loam, three parts, with well-decayed stable manure and leaf-mould in equal proportions for the other part. If you have it at hand, a sprinkling of any good fertiliser, say, a 4-inch potful to each bushel of soil, might be added. Failing this, use double the above quantity of bone-meal, or soot might be substituted. If the soil is light, little or no sand will be required; but if heavy and close, you may use it rather liberally. Use perfectly clean pots 4 inches across and pot very firmly. Place the plants at once in a cold frame, but afford air freely when they have become rooted. Remove the point of the plant on the latter starting into growth afresh, and plant out in well-prepared ground any time during the latter half of April. You do not say the age of the Asparagus when planted, and upon this very much depends. For example, it is not advisable to cut before the plants are in their third season, and then only lightly, the cutting to cease with the month of June. Much, too, depends on the rate of progress, and as this in turn is the direct product of cultivation, the man on the spot should be the better judge. If, however, you get a fair show of stems of the size of the index finger, or even the small finger, a moderate thinning of these for culinary purposes up to the middle of June would do no harm.

TREES AND SHRUBS.

LILAC BUSHES NOT FLOWERING (H. E. J.).—We advise you to stop the application of manure to your Lilac bushes for the present. You might try whether root-pruning will induce the bushes to flower. There is a possibility, however, that a lot of sucker shoots have grown from the base; if that is so, cut any such shoots out and leave the bushes nice and open. It would also be a good plan to thin out some of the thin, inside shoots, in order that all the vigour may go to the perfecting of the buds on the principal branches.

TREES TO PLANT NEAR A STREAM (C. B.).—It is not likely that fruit trees would be a success in the wet position you mention, although a great deal depends on whether the ground is wet enough to become sour or whether it simply keeps moist. In the latter case the greatest danger would arise from late spring frosts, for in such a position a little frost would be more harmful than a greater amount in a place where ground and atmosphere were higher and drier. Among deciduous, large-growing trees you have a choice of Willow, Alder, Poplar and Ash. We advise you to plant *Salix alba caerulea*, from which the best wood for cricket bats is obtained. The tree grows rapidly, and in from fifteen to twenty years would be likely to bring in a good return from the ground. Providing you simply wish for a decorative effect, you might plant the weeping *Salix babylonica* and the upright-growing deciduous Cypress (*Taxodium distichum*). Other trees suitable for the position are

Alnus glutinosa, *A. incana*, *Populus nigra*, *P. balsamifera*, *P. canescens*, *Salix fragilis*, *Fraxinus excelsior* and *F. americana*. If you prefer to try fruit trees, it would be as well to experiment with a few for a start, and plant them on mounds a little above the ordinary level of the ground.

CLEMATIS SEEDS (K. M.).—The Clematis seeds sent for examination appear to be fertile, and we see no reason why they should not germinate. Try sowing them in a well-drained pot in a compost of two parts loam, one part leaf-mould and one part sand. Cover the seeds very lightly with soil, just giving what will cover them nicely. Stand in a warm and moist greenhouse, shade from bright sunlight and be careful with the watering. Never allow the soil to become really wet or sodden, and, on the other hand, do not allow it to become dry. The present is a very good time to sow the seeds. Clematis seeds sometimes vegetate quickly, and at others lie several months in the soil before a movement is made.

PRUNING SHRUBS (Acacia).—An autumn-flowering *Ceanothus* may be pruned at once. Cut last year's branches back to within a couple of eyes or so of the base, but do not prune into old and hard wood unless young branches occur about the lower part of the plant; then you may cut the old branches down to them. As your plant appears to be rather old and neglected, we advise you to destroy it and purchase a young one, for such plants are very cheap. Your *Jasminum* can be cut fairly hard back at once. Thin the branches out well to begin with; then shorten all side branches back to within two or three buds of the base. If it is a winter-flowering kind, reserve any future pruning until the flowers have faded. Early April is a good time to prune Ivy, for at that period it may be cut very hard, and new growth is soon formed to hide the cuts and take off the bareness of the wall. It ought to be taken off all water-pipes and be cut down at least 1 foot below the eaves of the house. Old *Laburnums* do not stand pruning very well, for decay from the wounds often spreads into the trunk, and it is rarely that large wounds heal over. When branches have to be cut away, be careful to coat all wounds with tar at once. June and July are good months for the work. Your old *Lilacs* should have all sucker growths cut away from the base, and a good proportion of small branches from the inner parts of the bushes may also be removed. This may be done at once. In June go over the bushes again and remove suckers and inside branches which may be forming. Should you wish to lower any of the bushes, you may do so as soon as the flowers are over. It is a good plan to remove old flower-heads, and thus prevent the formation of seeds. Your Box bushes may be pruned in April. They will stand fairly hard pruning, but it is not advisable to prune them into very old wood. Clematis *Durandii* and *C. Jackmanii superba* are suitable varieties for your purpose, the former in mauve, the latter in purple. Ivy-leaved *Geranium Mme. Crousse* or *Fuchsia Charming* would be suitable for your basket. An ordinary wire basket will do quite well.

THE GREENHOUSE.

MAIDENHAIR FERN (M. C. S.).—If your Maidenhair Fern fronds are brown, or turning brown, it will not harm the plant to remove them all just before new fronds appear. Be careful to cut them off as close to the crown as possible. Some market-growers make a practice of removing all the fronds in spring. A higher temperature and a moister atmosphere than have been given in the past will be necessary until new fronds appear.

CYCLAMEN FAILING (J. H.).—Your case is a decided puzzle, and we do not feel any great confidence in suggesting a probable cause for your Cyclamen going off in the way they have done. It may be that some of the stimulants have been splashed into the crown of the plant; but what appears to us the most likely solution of the matter is that the little mite known usually as the Begonia mite, from it having been first observed on these plants, is at the root of the mischief. The damage, in all probability, was caused during the early stages of flower development, when the stems were very succulent. As the result of the abnormal weather experienced last summer, we have had many instances brought under our notice this season of damage done to Cyclamen by this pest; but in nearly every case the partially-developed petals had a pronounced brownish tinge. The worst of this mite is that its attacks are of so insidious a nature that a good deal of permanent mischief is done before its presence is even suspected. It may be destroyed by dipping in a solution of nicotine, or by vaporising with the XL All Vaporiser; but two or three applications are necessary in order to effect a perfect cure.

BEGONIAS AND CALCEOLARIAS FROM SEED (A. R. D.).—You will find an article on how to raise Begonias and Gloxinias from seed in THE GARDEN for January 6 last, and perhaps from this you may pick up some useful hints. With regard to the cause of your non-success, we might suggest various things, and then perhaps be wide of the mark. The surface soil on which the seed is sown may have been made too firm, so that the tiny rootlets cannot penetrate therein; next, the soil may have been kept too wet or too dry, or the atmosphere of the house too moist, so that the young plants damp off. Furthermore, the germinating seeds are exceedingly tender, and a few minutes' bright sunshine on them would prove fatal. In the case of these tiny, delicate subjects they should be pricked off singly in some light, fine soil as soon as the first leaf makes its appearance. You may, perhaps, have neglected to do this until the tender seedlings have gone too far. The Begonias should be sown early in the year, in order to give them a long growing period, whereas the Calceolarias are, as a rule, sown in May, June or July, the middle month being generally

preferred. At that time a greenhouse temperature sufficient for them, while they need a moist atmosphere and must be shaded from the sun. Like the Begonia these must be pricked off as soon as they are large enough to handle, and a sharp look-out kept for aphides or green fly.

CUCUMBERS AND TOMATOES IN THE SAME HOUSE (Miss M. K.).—It would be possible to grow both Cucumbers and Tomatoes in the same house during the summer months, but not advisable. Cucumbers require a close moist atmosphere, and Tomatoes a dry, buoyant atmosphere and plenty of air. You might, if you wish it, try a few Cucumber plants in a good light, rich soil, in boxes measuring 2 feet long, 1 foot wide and 1 foot deep, placing the boxes on the stage. The boxes should be half filled with compost first, and as the roots show on the surface, top-dress with thin layers of rich loam, rotted manure and leaf-soil. Sow the seeds the first week in April. The Tomato seeds may be sown at once, as it will be possible to keep the resultant plants safe from frost by covering them with newspapers at night for a time. Yes; fruit the plants in pots placed on the stage and follow the instructions given in THE GARDEN.

CHRYSANTHEMUMS FOR LARGE BLOOMS (F. R.).—The varieties Sunstone, Soleil d'Octobre and Mme. Julia Valet named in your list do not bear very large blooms, not large enough to show on boards or in vases. Soleil d'Octobre would flower too soon for the November exhibitions. Sunstone is a variety grown more for decorative purposes, and is in season at the end of November. Mrs. Greenfield.—Allow this variety to make a late natural break and "take" a late crown bud. Miss Mildred Ware.—Pinch the shoots early in April, and "take" second-crown bud. General Hutton.—Natural break and natural first crown bud. Splendour.—Natural break, but if this does not show by May 25, stop the shoot and cause a break. Mrs. F. Judson.—Natural break and first-crown bud. W. R. Church.—Stop May 10 if a natural break does not occur, and take first-crown bud about August 12. Norma Davis.—Stop April 15, second-crown bud.

MISCELLANEOUS.

PRIMULA LEAVES FOR EXAMINATION (J. P.).—It is always more satisfactory to us, for we can better form an opinion of the cause, when roots as well as leaves are sent in cases where the main trouble appears to be spotting of the foliage, for leaf-spotting frequently arises from some trouble at the root. We can find no fungus or trace of insects on the foliage in the present case and it is probable that the spotting of the foliage is the result of the plants having been allowed to become dry at some time during their growth.

DECORATING A CHURCH FOR A MARRIAGE (J. Decorator).—No hard-and-fast line can be laid down for decorating a church for a marriage, as so much depends on the taste and fancy of the individuals, and still more upon the amount of money that it is intended to spend on decoration. Some use only white flowers, while by other coloured ones are employed. Various ideas influence the choice of the flowers; for instance, if the bride has a floral name, such as Rose or Lily, the flowers employed are sometimes, as far as possible, limited to these two classes. Again, should it be a military wedding, the colours of the regiment are often reproduced in flowers. In a general way Palms are largely employed for wedding decorations and for flowers, Arum Lilies, Trumpet Lilies and Liliun speciosum are very popular. As a rule, the decoration is limited to the altar steps and the chancel, the Communion table being ornamented with cut flowers. For white flowers at the season you name, Spiræas are very useful. One point to be observed is that it is very necessary that the Palms (of which Kentias and Cocos flexuosa are the best) are tall and graceful in character, for a lofty church has a particularly dwarfing effect on plants arranged therein.

NAMES OF FRUIT.—J. Green.—1, Ross Nonpareil; 2, Cox's Orange Pippin, well kept.

SOCIETIES.

FLOWER SHOW AT EALING.

A Flower show will again be a feature of the Co-partnership Festival, which this year will be held at the Brenchard Garden Suburb at Ealing. The schedule, which extends to more than one hundred classes, is now ready, and can be obtained on application to the hon. secretaries at 6 Bloomsbury Square, London, W.C. Not only is the co-partnership movement offering prizes and trophies, but special awards by leading firms and certificates to prize winners by the Agricultural Organisation Society add to the attractiveness of the schedule, in which particulars of more than three hundred prizes are published.

The Royal Gardeners' Orphan Fund.—The committee of this Fund desires to acknowledge its indebtedness to a gentleman, who was unable to be present at the recent annual meeting, for his contribution which will ensure the receipt of 5s per week by one of the unsuccessful candidates on that occasion, an act of thoughtful generosity for which the child's mother is deeply grateful.

GARDEN

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ORCHARD AND WOODLAND

SATURDAY,

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THE GARDEN.

No. 2105.—Vol. LXXVI.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Rhododendron campylocarpum in Argyllshire.—Many of the Himalayan *Rhododendrons* thrive admirably in the more favoured spots in the West of Scotland near the sea, and one of the places where they flourish best is at Poltalloch, Lochgilphead, Argyllshire, where Colonel Malcolm, C.B., has a very fine collection of flowering and other trees and shrubs and hardy flowers. Here *R. campylocarpum* has survived and flourished for many years without suffering from the weather it has experienced and has given a good display of its pretty, sulphur yellow, bell-shaped flowers.

Flower Show Schedules.—The Journal of the Royal Horticultural Society for March contains an excellent article by the Rev. W. Wilks on some difficulties in flower show schedules. As all judges know, there is a great deal of laxity in many of the schedules drawn up for provincial shows, and this oftentimes causes a great deal of ill-feeling between exhibitors. Those who are responsible for the compilation of schedules should read the article referred to before commencing. Mr. F. J. Chittenden, F.L.S., Director of the Society's Laboratory at Wisley, also contributes an interesting article on some plant diseases new to or little known in Britain. These include Lettuce leaf-rot, leaf-spot of *Campanula* and streak disease of Sweet Peas (well known, but little understood). The Journal is sent free to Fellows of the society, and can be obtained by non-Fellows, price 5s., from the Secretary of the society, Vincent Square, Westminster.

A Warning.—We have received complaints from several readers living in the suburbs of London and cities in the Midlands that hawkers are selling what are supposed to be the best varieties of Carnations and Roses at low prices. The trick is a very old one. The supposed Carnations, which have healthy, vigorous foliage, are usually nothing but worthless seedlings, and the Roses are generally Manetti or some other stock used by nurserymen for budding good Roses upon. The roots are neatly tied up with moss, and the names on the labels are, we presume, taken from a nurseryman's catalogue and applied haphazard. To make matters worse, some of these itinerant vendors carry with them a catalogue of a well-known Rose or Carnation firm, and state that they are selling the plants on behalf of that firm. Our readers will be well advised to have nothing to do with these rogues, and we feel sure that any firm whose reputation is being jeopardised in this way would welcome information that would enable them to stop the practice.

A Good Greenhouse Rhododendron.—In those gardens where large, cool greenhouses have to be furnished, an ideal home may be found for the

handsome Himalayan *Rhododendron griffithianum*, for it wants no more than protection from frost. In the Southern and South-Western Counties it thrives excellently out of doors, and at the present time its large white flowers, which are from 4 inches to 5 inches across, are opening. The species is not, however, of much account, so far as the production of flowers goes, until it has attained a considerable size, especially when raised from seed, for although young plants produce a few trusses of flowers, it is only those which are moderately well matured which bear a full crop of bloom. In some gardens it is known as *R. Aucklandii*.

The Alpine House at Kew.—Visitors at Kew during the next few weeks would do well to make a point of seeing the Alpine House, for in it a profitable half-hour might be spent at any time. On the occasion of a recent visit the following plants, among others, were noted in flower: *Puschkinia scilloides*, *Muscari armeniacum*, *Tulipa kaufmanniana*, *T. pulchella*, *T. fosteriana*, *Hyacinthus azureus*, *Brodiaea uniflora*, *Cyclamen pseudoibericum*, *C. Coum*, *Corydalis decipiens*, *C. bulbosa* and variety *Halleri*, *Draba cuspidata*, *D. azoides* and other species, *Gentiana verna*, *Heloniopsis japonica*, *Anemone pulsatilla*, *A. hortensis*, *Saxifraga* in variety, *Romulea cruciata*, *Shortia grandiflora*, *Trillium nivale*, *Rhododendron intricatum*, *Primula frondosa*, *P. pubescens alba*, *Scilla italica præcox* and *Narcissus cyclamineus*. The collecting together of highly ornamental plants such as these in a quite cold house is well worth while, for the full value of the flowers is obtained while the flowers of outdoor plants are subject to injury from inclement weather.

A Beautiful Flowering Shrub.—Previous to the commencement of the present century, about four species of *Corylopsis* were known in British gardens; but the introduction of new shrubs from the Far East has been pushed so vigorously during the last twelve years that it has been possible to add nine other species to this genus alone. Some of these species were previously known by dried specimens, but were not in cultivation. *C. pauciflora* is one of the older kinds, although not a common shrub. A native of Japan, it forms an elegant bush a few feet high, with slender wiry branches, which bear bright green, heart-shaped leaves up to 3½ inches in length. The leaves are very beautiful in springtime, for from the time the buds begin to burst and the leaves to show until they are fully developed they are prettily marked with rich brown and pale green. The flowers appear in short, axillary, pendent racemes before the leaves. They are upwards of half an inch in diameter, primrose yellow in colour, and scented like Cowslips. Unfortunately, it is subject to injury from spring frosts.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The Daphnes.—I am sorry that in my article on Daphnes in your issue of March 2 the beautiful *D. Cneorum* and its varieties *D. C. majus* and *D. C. fol. var.* were not mentioned. They are three of the best plants for rockeries and borders. We found last year on the Jura a pure white variety of it, which, I think, will be the best loved of all in gardens. I must add that in the article the group of *Daphne odora*, *marginata* and *japonica* is, unfortunately, comprised under that of *D. Mezereum*, which was not my intention.—H. CORREYON.

Gaillardias.—"D.," on page 118, issue March 9, touches on a few points connected with the cultivation of these plants, and his remarks are helpful to those who are inexperienced in the growing of Gaillardias. Undoubtedly, they are difficult plants to associate with other subjects, but when grown in masses they are very effective indeed. I would like, however, to draw attention to the fact that the plants do remarkably well on a north border, even in a position where the sun's rays rarely penetrate in the brightest weather. The flowers, I found, were more richly coloured than those on plants in the open.—AVON.

Pruning Rose La France.—I presume all Rose-growers prune their trees so as to obtain quantity combined with quality of flowers. Having tried hard pruning and light pruning in regard to the variety above-named, I find that light pruning and judicious thinning out of all weakly shoots answer best. The kind of pruning needed is that between the pruning of a Hybrid Perpetual and a Hybrid Tea. If the surface soil is then removed and a good top-dressing of rich lumpy loam and well-rotted manure put on, the crop of blooms from a healthy bush will be quite satisfactory.—SHAMROCK.

Hardy Azaleas from Seed.—I wonder why more people do not grow these from seed? I sow mine when ripe about the end of January, keep the plants in a cool greenhouse until about two inches high, and then keep them in a frame until the following spring, when they are planted out. I have planted out in the autumn of the year they were sown, but found many of the plants were lifted by the frost. Many show a flower or two the third year from sowing, and, after that, practically all flower freely. The colours are very good, and the plants want no further looking after. As long as there is no lime in the soil they seem to thrive here in North Lancashire, and could be easily raised by the thousand.—W. F. E.

Hardy Azaleas.—Your correspondent "B." refers to the above plants on page 118 of March 9 issue. Some years ago, when engaged in a garden in Mid-Cheshire, I was impressed by the loveliness of a hardy yellow Azalea which did well in that part, reaching quite 6 feet in height. Although a great deal of tree and shrub planting took place there annually, no other preparation was made beyond trenching the ground. In a neighbouring garden in this district (East Middlesex) the above species likewise does well. Did "B." notice the illustration and notes on hardy hybrid Azaleas in January 27 issue of THE GARDEN? The plants are growing in Highgate, and a great many of them are approaching 5 feet in diameter. The mode of culture is given.—C. T.

Saxifraga Aizoon la graveana.—In Mr. Wyndham Fitzherbert's interesting article on the dwarf forms of *Saxifraga Aizoon* in the issue of March 2, page 105, he refers to one with the "impossible name of *La Ga Dauphane*." No two persons seem to agree on the spelling of the name of this unfortunate plant, yet it is quite simple, and should read *Saxifraga Aizoon la graveana*. If the "Kew Hand List of Herbaceous Plants" were adopted as the standard, there would be a possibility of extricating the nomenclature of hardy plants from the almost hopeless confusion which now prevails.—C. DAVIES, *Stevenage*.

A Sweet-Scented Plant.—I have just been replanting a large specimen of *Monarda didyma*. It had been in its position three years, and the centre was getting weak and decaying. The clean young growths were all round the outside of the clump, after the manner peculiar to several other herbaceous subjects. The variety we grow is Cambridge Scarlet, which much surpasses the original in intensity of colouring. Any good garden soil suits it; but should the position incline to dryness, compensation must be made by reasonable waterings when making growth. It is a really first-class border plant, and useful for cutting. The most striking feature about it is its sweet scent; This is apparent from the tiniest leaf and stem to the full flower. Sometimes when working near a specimen one accidentally touches a leaf or growth, and immediately a sweet perfume is noticeable. The scarlet flowers are borne in whorls, and the stems or growths are square instead of round like ordinary herbaceous stems.—C. TURNER, *Ken View Gardens, Highgate*.

Gold-Laced Polyanthuses.—Mr. Bentley's appeal on behalf of these ancient florists' flowers, once so favoured, now so seldom seem, recalls such growers of them as Samuel Barlow, Ben Simonite, the Rev. F. D. Horner, R. Dean, James Douglas and some others who presented them at exhibitions of the National Auricula Society in London. If from Lancashire, they were good; if from the South, poor. Climate seems to have had so much to do with these rather delicate yet hardy plants. Down South greater warmth seemed to demoralise the flowers. When at Bedford, I sought to grow for my brother Exile, Lancer, George IV. and such other varieties as were obtainable. We found that summer heat weakened growth, yet the plants were kept as cool and shaded as possible, and in spring the flowers were always deficient in refinement. I wonder whether anyone saved stock of Barlow's beautiful red-ground Sunrise, which was indeed a lovely variety, but which, I fear, passed away with its good Manchester raiser.—A. DEAN.

How to Arrange Daffodils.—This is one of the burning questions of the moment, and as experts seem to differ widely in their opinions nowadays, it would be well if some definite pronouncement could be elicited from those who are in the habit of acting as judges, so that the poor exhibitor should know how to proceed. Now, for instance, I was told at the Royal Horticultural Society's show on March 5 that Mr. Christopher Bourne had lost some points through inferior arrangement. This was a staggerer to me, as I considered his arrangement was about as good as it could be. I wonder what the judges really want? Surely not that stiff and staring style of putting up which gives every flower what I once heard Mr. Felton describe as a sort of "I've-got-you-in-my-eye look." Then there is (or was) the other extreme at one time practised by my old friend, the Rev. G. P. Haydon, who used

to arrange some of his flowers with their "backs to the audience." I remember a great raiser once called my attention to a certain Daffodil because it had such a "beautiful back," but I confess that I quite failed to rise to the situation, and neither then nor since have I been able to satisfy what æsthetic sense may be in me by admiring the back of a flower. Let me quote for a moment from the book written by Mr. Christopher Bourne's father: "They (the flowers) should be tastefully arranged with their faces turned, some wholly, some partly, to the front, and so that all may catch the eye." These words were written by the leading judge of his day (and a day not so very long past). It would be both interesting and instructive to hear from his successors as to whether they go on his lines in judging, and, if not, what new canons they have to lay down for us.—F. HERBERT CHAPMAN, *Rye*.

Bitter-Pit in Apples.—I note in your issue for March 9, page 119, that your Colonial correspondent Mr. D. McAlpine asks for any information concerning bitter-pit in Apples, and refers to the fruit figured in THE GARDEN, December 2, 1911. He desires to know the rainfall during the maturing of the Apples in the orchard where the fruit of Tower of Glamis was grown. As the Apple figured was grown in these gardens, I have pleasure in giving him the rainfall during the maturing three months, viz., August, September and October. We had a slight rainfall on the first five days of August, amounting to only 0.65; then there was no rain till the 21st. From then till the end of the month we had 0.72. In September rain fell on ten days, with a total of 1.49. In October rain fell on seventeen days, the heaviest on the 21st, when 0.75 was registered. The total for the month was 3.48. Our soil is a thin loam overlying the usual brashy limestone of the Cotswolds, and we soon suffer from lack of moisture. I think the trouble was due to the excessively hot summer, followed by the rains in the latter end of September and October, as the earlier varieties, such as Mr. Gladstone, Beauty of Bath, Lady Sudeley, &c., were not affected. I did not observe any spots until the October rains. We grow over sixty varieties of Apples. The softer-fleshed varieties were affected most.—D. ELKINS, *The Gardens, Trewsbury, Cirencester, Gloucestershire*.

English-Grown Hyacinths.—At the show at Vincent Square on March 5 and 6, Messrs. Bath of Wisbech exhibited, among other things, a little group of Hyacinths that had been brought up from their babyhood in their own nurseries. That is to say, the parent bulbs had been prepared there for producing the tiny bulbils which are the infants of the future larger bulbs as we know them, and these little mites had been grown on until they were strong enough to produce ordinary flowers. Readers may know the tale of how first the pupils, and then Dr. Blackie himself, "scored" over one another by rubbing out a letter from the sixth word of the notice "Dr. Blackie will meet his classes on Monday, &c." Well, the original label on the Hyacinth said, "Dutch miniature Hyacinths, &c." It was only when I was talking about them to Mr. Leak, the manager of the firm, that I learned the truth, and on my suggestion "Dutch" was deleted. Later on a closer inspection revealed the fact that they were not all "miniatures," but that some were fine "second-sized" bulbs at least, and I longed to do what Dr. Blackie did—rub out another word.—J. JACOB.

A Giant Mushroom.—I am sending you a Mushroom that I think is a little uncommon. I am sorry I neglected to send it when it was in a better condition. It measures 1 foot across and 45 inches or more round, and the stalk is 9 inches round. It weighs 1lb. 5oz. I have some more very fine ones, which I think are the largest I have ever grown. The spawn is Carter's.—A. G. GENTLE, *Little Gaddesden, Berkhamsted.*

A New Flowering Currant (*Ribes laurifolium*).—This new interesting shrub, which was shown before the floral committee of the Royal Horticultural Society on February 22 and gained an award of merit, is one of the subjects raised from seed collected by Mr. E. H. Wilson in China. Though the flowers are not showy in colour, the plant is, nevertheless, peculiarly attractive. The growth, for instance, suggests another family altogether, and the fully-matured leaves during the summer are of a deep bronze colour. The natural habit of the plant is dwarf and spreading, and in its native habitat it is found among rocks. I believe it will prove a very useful plant for the rock garden in the near future. It is quite hardy, and a young plant opened and produced its flowers during the week of cold weather, when we registered 20° on two consecutive nights. The flowers are produced in drooping racemes, which, since the photograph was taken, have considerably lengthened. The individual flowers are of a pale yellowish green, much resembling Cowslips, and last in a fresh state for a considerable time. Its early flowering will undoubtedly add to its popularity. Whether the black, oval fruits will mature in this country remains to be seen.—E. BECKETT, *Elstree, Herts.*

Why do Snowdrops Fail in Some Soils?—I have read with interest the remarks of Mr. Arnott, page 82, February 17, and Mr. W. A. Watts, page 102, March 2, on this subject. Although my experience has been of a negative kind, I offer it for what it is worth, more especially because it rather clashes with Mr. Watts' dictum as to stiff, badly-drained soil. The natural soil here is mostly yellow clay, the exception being a portion close to the shore of the Firth of Forth, which is pure sand, having at one time been inundated by the sea. The gardens proper all contain a considerable amount of "forced" soil, lying on the clay, and, like the bulk of the property, retaining stagnant moisture to a considerable extent during winter. We have large quantities of the common Snowdrop, single and double, growing under all the conditions named, and all thriving equally well. During the thirty years I have had charge here I am not conscious of a single bulb having perished; on the contrary, they have increased enormously. We have also a quantity of *Galanthus Elwesii* growing in the gardens, and it succeeds equally well. I should add that all the naturalised Snowdrops here are more or less planted under trees, but mostly where the leaves are raked up annually.—CALEDONIA, *Mid-Lothian.*

The New Race of White Daffodils.—One noticed three new interesting Daffodils on the stand of Mr. Herbert Chapman at the Forced Bulb Show at the Royal Horticultural Hall on the 5th and 6th inst. They were a series of triandrus-Leedsii hybrids, all by different raisers, named respectively White Witch, Alabaster and Madonna, and all were characterised by their purity of colouring, refined appearance and delicate waxy texture. The first-named is a comparatively small flower, the cup on first opening having a pale citron tinge,

which afterwards fades to quite pure white. Alabaster is larger and more solid, and the entire flower opens pure dead white, a most charming thing. Madonna, the gem of the trio, was generally pronounced the finest pure white Daffodil that has yet been shown, a very large flower with slightly reflexing petals, which rather enhance its beauty, and the entire flower looked as though it had been modelled out of a block of white wax. These new triandrus-Leedsii hybrids are now proving to be of strong constitution and good increase, and they all possess the good length of stem required by the market-man. Is it, then, too much to hope that these hardy flowers will before long compete with, and perhaps displace, such things as the Eucharis Lily for wreaths, bridal



YOUNG SHOOT OF THE NEW FLOWERING CURRANT, *RIBES LAURIFOLIUM*.

bouquets and work of this sort? The stocks as yet, of course, are small; but a watchful eye should be kept on the best of them, and most probably to the careful and far-seeing grower they will prove to be no bad investment.—A.

FORTHCOMING EVENTS.

March 26.—Bournemouth Horticultural Society's Spring Flower Show (two days).

March 27.—Royal Horticultural Society's General Examination; Liverpool Horticultural Association's Show (two days), Royal Botanic Society of London Meeting.

March 28.—Torquay District Gardeners' Association Spring Flower Show.

March 30.—Paisley Florist Society's Spring Show; Société Française d'Horticulture de Londres Annual Dinner.

THE ROSE GARDEN.

THE ROSE AS A HEDGE PLANT.

WE are annually receiving so many very vigorous-growing novelties that it will soon become—in fact, has become—a problem what to do with them. If planted in the beds or borders, they soon encroach upon the other occupants and are much out of place, and one cannot grow them all as standards or use them as climbers or pillar Roses; but I think many hedges of Roses could be planted about the garden far more than we see at present. In the first place, every Rose garden should be enclosed with hedges of Roses, even if it be thought necessary to have evergreen shrubs behind them, and certainly in a very large rosery several hedges should be employed, not, of course, extra tall to obscure the view, but to add diversity and also to be of utility in sheltering beds of tender Teas. But I have not so much in mind tall hedges of Roses, which we can have by planting the various ramblers. They are majestic and also useful as providing grand shelter from cutting winds even in winter.

Strong-growing Roses.—What I desire to emphasise is the possibility of utilising such vigorous-growing Roses as J. B. Clark, Hugh Dickson, Mrs. Stewart Clark, Dr. O'Donel Browne and others as hedges. Why should all that fine growth which they produce annually be cut away or reduced at pruning-time, when by preserving much of it we could double and treble the crop of bloom? Now, a hedge of such large-flowered Roses is a real joy, and with care in thinning out old wood, also in nourishing the plants with liquid and other manure, we may have grand hedges of Roses, yielding an abundant harvest of bloom.

Mixed Hedges.—Many of the splendid climbing Tea and Hybrid Tea Roses, such as Bouquet d'Or, Lady Waterlow, Gustave Regis, William Allen Richardson, Reine Marie Henriette, Johanna Sebus, Ards Rover, Ards Pillar, Rosette de la Legion d'Honneur and many more, could be blended together to form a delightful mixed hedge of Roses, and, being perpetual-flowering, would be a source of delight from June to October.

There is one Rose I should like to direct attention to for this purpose, and that is Gottfried Keller. Surely it is one of the loveliest of semi-double Roses we possess, and how charming it would be as a 3-feet to 4-feet hedge with Irish Elegance, the two giving us quantities of elegant bronzy yellow flowers throughout the season. I think we do not sufficiently appreciate Gottfried Keller. Its half Briar-like nature makes it a very sturdy grower, and yet there is in its bloom all the delicacy of a Tea Rose. It was obtained by a series of crosses, which proves the value of so doing, and it is to be hoped raisers will attempt more in this way. I fully expect, through the Pernetiana group, that we shall soon have quite a number of good Roses suitable for hedges. There is one of this group, Beauté de Lyon, which must prove to be a good variety for this purpose; indeed, I think it will be a sort that will resent the knife, and it must be grown either as a free bush or in pillar or hedge form. What a glorious colour it is, coral red, slightly shaded with yellow. A hedge of this alone would be a splendid feature in any garden. The China Teas would make beautiful low hedges—I refer to such sorts as Comtesse du Cayla, Queen Mab, Eugène Resal, Laurette

Messimy, General Schablikine, Corallina, Safona, &c. They would provide us with an array of blooms from June to October, and if relieved of old wood occasionally, the resulting new shoots would keep up the youthful condition of the hedge.

In the formation of a new Rose garden I would suggest that provision be made for several of these hedges. They would break up the somewhat flat appearance which many modern Rose gardens are apt to assume. I hope, if ever the National Rose Society should establish a Rose garden—as they, I think, must do sooner or later if they wish to fulfil their duties as guardians of the national flower—that we shall see all such examples as the Rose hedges I have attempted to describe put into practice, so that the public may see what is possible in this direction. The wealth of variety can, in my opinion, only be made really useful in this way, and I believe that such Rose gardens will become far more numerous than they are to-day, for it is the flower above all others for English gardens, providing us with delight from the beginning of May until the snows of winter.

In conclusion, I would suggest also hedges of Moss Roses, Scotch Roses, alba or Maiden's Blush Roses, Bourbon Roses, Hybrid Perpetuals of the Ulrich Brunner type, and the Austrian Briars, not forgetting the rugosas; then, as I said before, tall hedges, if you like to shield the rosery from cold winds, composed of the glorious wichuraianas, Penzance Briars, multifloras and the various species.

FEEDING POT ROSES.

THERE is a difference of opinion among experts whether Roses grown in pots should have stores of food placed in the soil or have supplies given them as the need arises. I am strongly in favour of the latter method where pot-grown Roses are concerned, as we are enabled to give just the needful amount of stimulant, whereas if placed in the soil the roots are compelled to draw on the same whether they want it or not. What I advise in making up compost for Roses is to let it consist of good fibrous loam two parts, well-rotted manure one part, and about three pints of bone-flour to two bushels of compost. This bone-flour is very slow in its action, and the little roots are not compelled to absorb the nutriment all at once.

If the bone-flour has been omitted, a dressing may be given at once. Just cover the surface soil with it and lightly point it in with a label; but if the bone-flour has been mixed with the compost, the Roses can dispense with any other stimulant until the buds begin to show.

When they arrive at this stage, watering once a week at first, and then twice a week until the buds show colour, will be all that they require in order to produce really first-class blooms.

For liquid manure I cannot recommend anything better than cow-manure and soot, and there is now on the market a very useful infuser (Malden's) that enables one to infuse the manure in a more convenient, cleanly and rapid manner than hitherto. I would strongly recommend this to the amateur



A FINE SPECIMEN OF THE JAPANESE UMBRELLA PINE.

grower, both for use in feeding his pot Roses and for those growing outdoors. For many years soot-water and liquid cow-manure have proved to be really first-rate liquid manures. Moreover, they are inexpensive and readily prepared. The old method of dropping a bag of either soot or cow-manure into a tub of water and allowing it to diffuse has been superseded by Malden's Patent Infuser, this being quite the simplest and cleanest way of preparing clear liquid manure.

TREES AND SHRUBS.

THE JAPANESE UMBRELLA PINE.

(*SCIADOPITYS VERTICILLATA*.)

THIS is one of the most distinct and choicest hardy conifers introduced into this country. The *Sciadopitys* is a monotypic genus, and quite different from any other conifer. It is a native of Japan, where the Umbrella Pine is said to grow wild only on the mountains of Nippon. The tree has, however, been freely planted by the Japanese, more especially in the vicinity of their temples. The Swedish botanist, Thunberg, records its cultivation in Japan in 1776. To Thomas Lobb belongs the credit of introducing the first plant in 1853. This, unfortunately, died, but eight years later Mr. John Gould Veitch brought home seeds from Japan. The specimen illustrated is said to be one of the seedlings raised from these seeds. The tree is now 21 feet in height. Although reputedly slow in growth, this, it will be at once noticed, is unusually slow progress; but the atmosphere and dry, sandy soil at Kew, where the plant is growing, are far from ideal for the Umbrella Pine. Although perfectly hardy, the conditions favourable to the development of the tree appear to be warm, sheltered positions and a light, sandy peat with plenty of moisture in summer; lime is said to be detrimental. Several trees of moderate size are recorded as growing in this country—a specimen at Hemsted, Kent, over forty feet in height, and one in South Devon 30 feet in height—but there are no large specimens. Trees in Japan attain a height of 100 feet to 120 feet. It is an interesting fact, told me by a Japanese, that while young, transplanted trees cone in quite a small state, the wild trees grow to a very large size before producing cones. A notable character of the tree is the narrow, pyramidal shape with a tapering leader. Cones and ripe seeds are produced in this country, taking two years to mature; in fact, the specimen illustrated cones so freely that it has been thought desirable for the health of the plant to remove a large percentage of them. The cones are cylindrical in shape, about three inches long and 1½ inches in diameter. Seeds germinate freely, but to rear them successfully great care and plenty of attention are necessary in a young state. A second means of propagation is to graft the terminal shoots on pieces of the root taken from a young tree during March or April. The Umbrella Pine will be found listed in most tree and shrub catalogues, the price varying, according to the size of the plants, from 1s. 6d. to 5 guineas. A. O.

EARLY FLOWERING SPIRÆAS.

THE numerous shrubby Spiræas which bloom during the months of March, April and May form an important element in garden adornment, for all are easily grown and free-flowering, while there are few parts of the country unsuitable for them. Whether planted in beds or as groups in shrubberies, they are equally desirable, and the only thing that can be urged against them is the sameness of the colour of the flowers, for in most instances they are white, the colour of the few exceptions being cream.

Soil and Situation.—The most satisfactory soil for Spiræas is that of a loamy nature, but whether of a light, medium, or heavy consistency matters little, providing it is well drained. Aspect need not be a serious consideration, for, although plants in a sunny position give the most satisfactory results, those planted under less favourable conditions give a good account of themselves, except when shaded by large trees. A top-dressing of well-rotted manure may be given with advantage every second year, for, like other Spiræas, they are rank feeders.

Pruning.—Little in the way of pruning is necessary, and in this they differ widely from the various kinds which bloom during late summer, for they are improved by a rather severe pruning and thinning out each spring. The early-flowering kinds may be allowed to go unpruned for several years; then all that is necessary is a little thinning as soon as the flowers are over, except when plants are inclined to outgrow their positions or are becoming leggy, when their height may be safely reduced, taking care to thin out the branches at the same time.

Cuttings and Layers.—Propagation may be effected by one of two means—cuttings or layers. In the former case sections of half-ripe shoots 3 inches to 4 inches long should be taken during July and August and inserted in sandy soil in a close propagating-case. Roots will be formed in the course of a few weeks. Spiræa Thunbergii and S. arguta are, however, sometimes found difficult by inexperienced persons to root from cuttings; but no difficulty will be found in obtaining well-rooted plants if a few of the lower branches are pegged down into the ground in spring. These will be well enough rooted by autumn to remove from the parent plant, and after a year in the nursery they may be transferred to permanent quarters.

Several members of the group form excellent shrubs for forcing, and with little trouble a succession of bloom may be kept up from January to April. Although old plants lifted from borders give good results when forced, the best plants for the purpose are those grown specially for forcing. They are at their best at from two to four years of age, for about that period all the wood is young and vigorous, the plants are not overgrown, and the maximum of value is obtained from the minimum of space.

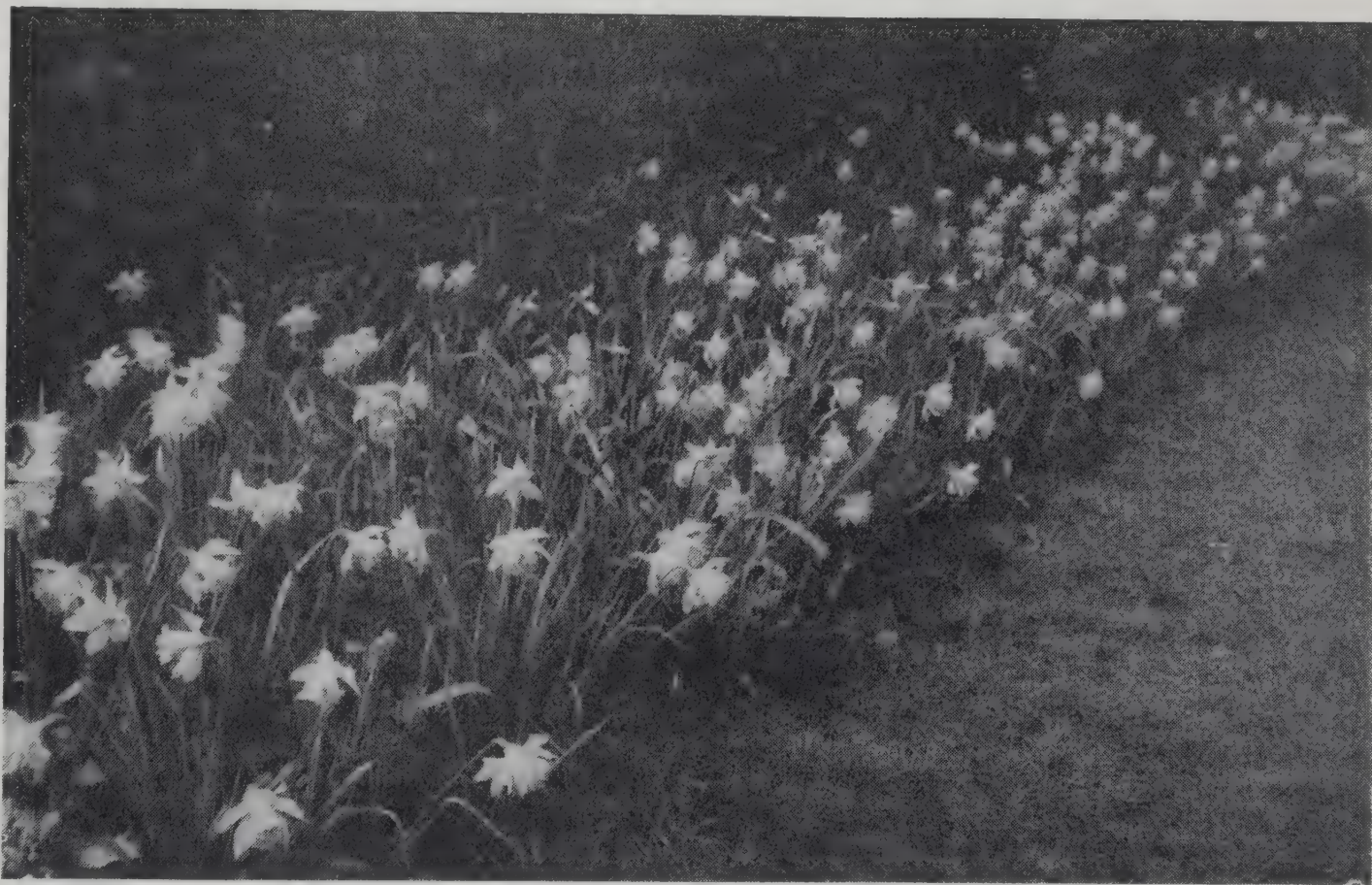
In the following selection of species, &c., allusion is only made to the more showy kinds:

Spiræa arguta.—If one kind only is required, preference should be given to this, for in addition

to being one of the most showy of all Spiræas, it may readily lay claim to being one of the best twelve spring-flowering shrubs. It is said to be of hybrid origin, and to claim S. Thunbergii as one of its parents. Growing 4 feet to 5 feet high, it forms a shapely bush of thin, wiry branches, with numerous secondary branchlets clothed with dainty, bright green leaves. The white flowers are borne from axillary buds, and make each growth a streamer of bloom.

S. chamædrifolia is a European species of rather stiff, erect habit, with grey stems, light green leaves $1\frac{1}{2}$ inches to 2 inches long, and short axillary inflorescences of white flowers. There are several varieties of this plant.

S. conferta.—This is another hybrid, its parents being represented by the two Eastern European species, S. cana and S. crenata. A superior plant to either parent, it is popular for beds and borders, while it is one of the most widely-grown kinds for forcing.



A BORDER OF WILMER'S DOUBLE DAFFODIL, ONE OF THE EARLIEST TO FLOWER. (See page 146.)

S. crenata forms a shapely bush 3 feet to 5 feet high, and bears numerous flattened heads of white flowers from short axillary shoots during April and early May.

S. media is a native of Europe and certain parts of Asia. It forms a rather tall bush 4 feet to 5 feet or so high, with the main branches rather stiff and upright, and the secondary branches of a looser character. The white flowers appear during late April and May in umbels, which terminate short axillary growths. It is very free-flowering and useful for forcing. In some gardens it is known as S. confusa.

S. prunifolia.—This Japanese and Chinese species is only worth attention by reason of its double-flowered variety, and even this is less useful for general work than several of the afore-named kinds, for it is rather susceptible to damage from spring frosts. It is, however, extremely useful for forcing, for the small, double white flowers are borne from almost every bud

on the previous year's wood. When well grown, annual, semi-pendent growths 2 feet to 3 feet long may be obtained, which are of a very pleasing character when covered with flowers.

S. Thunbergii is the earliest of the Spiræas to open its flowers. It is often at its best from the middle to the end of March, and very frequently flowers are to be found in February. A native of China and Japan, it grows 3 feet or so high, and is specially noticeable by reason of the graceful effect of its thin, wiry branches and dainty, bright green leaves. The white blossoms are small but numerous.

S. trilobata, a native of Northern Asia, is a showy shrub growing 4 feet or so high, bearing flattened heads of white flowers in May. It is, however, chiefly interesting as being one of the parents of the following shrub.

S. Van Houttei.—This is a hybrid between S. cantoniensis (a comparatively worthless species so far as this country is concerned) and S. trilobata.

It is popular for forcing, and so freely are the flowers produced that branches and young leaves are almost hidden by them. As an instance of a hybrid being greatly superior to its parents, this might be advanced as a fitting example. W. D.

THE CORNELIAN CHERRY.

THE Cornelian Cherry, Cornus Mas, is one of the earliest shrubs to bloom out of doors. In Southern gardens the flowers opened in February this year, and there is every prospect of them lasting well into April. This is undoubtedly one of the most showy of the Dogwoods, and when seen at its best it is literally smothered with tiny tufts of bright yellow flowers. These are succeeded in autumn by Cornel berries, cherry red in colour, which are much appreciated in Eastern Europe for preserves. The Cornelian Cherry is a native of Europe and is widely distributed, but it does not occur wild in this country.

THE FLOWER GARDEN.

WILMER'S DOUBLE DAFFODIL.

FOR its early flowering alone Wilmer's double, golden yellow Daffodil is worthy of a place in every garden. Known by the botanical name of *Narcissus Telamonius plenus*, this Daffodil has been grown in this country for many years, and is among the first of the large-flowered section to open its blossoms in the outdoor garden. As a plant for a shrubbery border, where it may be planted in irregular clusters, it has few equals, and if left alone will increase and last in good condition for many years. It is also a good Daffodil for planting in grass, and, indeed, in almost any position where early flowers are appreciated. Despite its double flowers, it is not easily damaged by rough weather, and for cutting it is exceedingly useful. It is true that the flowers are not nearly

delay in carrying out the operation, because it is desirable that the roots shall have an early opportunity of commencing to establish themselves in their flowering positions; therefore planting must have consideration.

Preparing the Soil.—There is no gainsaying the fact that the Carnation—and readers must be good enough to accept this name as including also the Picotee—appreciates a deep and cool soil which contains readily available food and lime. When, then, the preparatory work is put in hand, the deeper the soil can be made friable the better the results are likely to be. No one should rest satisfied with less than two full spits, or about twenty inches, and, if it is not difficult to go still deeper, do not hesitate to do it, as the results will fully justify the efforts made.

In the use of manure some judgment must be exercised, and the convenience of the cultivator must, of course, be taken into consideration.

when the weather is wet, or trouble is bound to ensue; but if it is in suitable condition, nothing except good can follow the firming.

It has already been said that lime is essential to the most gratifying results, and it must be incorporated with the soil. Precisely what form it will take must necessarily depend upon various circumstances, but crushed lime or mortar rubble is excellent, as it yields the requisite lime and, at the same time, aids in the amelioration of an unkind medium. But each grower must use that which is most convenient to himself in this direction.

Planting.—This process demands care, of course, but it is easily carried out. It is improbable that there will be the slightest check to progress unless the roots have matted extremely hard round the old ball of soil. If this condition prevails, loosen the sides very carefully to release them from their uncomfortable and unsatisfactory state; but they must not be torn or broken, or more harm than good will be the result. The crock or crocks at the bottom are removed, the soil is loosened round the sides, and the surface is scratched away at the same time. The hole must be deep enough to accommodate the ball with a covering of 1 inch or 2 inches of soil, and it must be firmly surrounded and left with a slight fall towards the plant when complete. There is a possibility that this fall will be a disadvantage in a heavy soil, should the season prove to be a wet one; but even so, it can easily be drawn to the normal level or given a fall from the plants if such is judged to be desirable. In a dry time the depression facilitates the application of water and is a decided advantage. All planting should be completed by the end of the first week of April if possible.

SNOWDROPS AT ST. MARY'S ISLE, KIRKCUDBRIGHT.

I KNOW of no place in Scotland where there are more Snowdrops, or where they are grown in a more delightful way, than at Captain Hope's charming place at St. Mary's Isle, Kirkcudbright. It is impossible to hazard a guess as to the number of Snowdrops there are in the grounds, but there must be many millions of these lovely flowers. They

are literally in acres. What adds to their beauty and to the appearance they give is the fact that they are not in huge stiff groups together, but are scattered over the extensive policy in great sheets of the most informal outline. In some places, as shown in the accompanying illustration, they are in close, irregular masses, with but little space between the bulbs; but in others they are just as if they had sprung from seeds, as they certainly have, and are scattered in the most natural way.

It would be impossible to conjecture the time of their introduction to these grounds, but they probably date from the time of the old Priory of St. Mary, which was founded in the days of King David I. of Scotland, and they must have been spreading since then. They are in all parts of the grounds, on sloping banks by the trees, among the copsewood by the banks of the estuary of the River Dee, and in sheets in the more open parts,



SNOWDROPS NATURALISED IN THE WOODLAND AT ST. MARY'S ISLE, KIRKCUDBRIGHT.

so graceful as some of the single varieties, but what it lacks in this respect is more than compensated for by its earliness and general utility. This year it has flowered earlier than usual, and many blossoms were noted outdoors in the London district in the second week in February. The illustration on page 145 represents a narrow border of this Daffodil, and gives some idea of its beauty when massed in this way. B.

SEASONABLE NOTES ON CARNATIONS.

Plants in Frames.—Generally speaking, the rooted layers which were potted up last summer and early autumn have passed the winter splendidly, and are now in excellent condition. If the lights are continuously off, there is no material hurry to get them out into the open beds or borders, but there should be no unnecessary

Whatever is used should be thoroughly rotted, and it ought to go down at least 12 inches beneath the surface, so that it shall be away from the roots. Some amateurs fear to put the manure down in the manner suggested, thinking that the plants will not derive the full benefit of it; but this is an error, as the food rises to the roots in the form of moisture, and as long as the soil is maintained in correct condition this process is constantly proceeding. The ideal Carnation soil is a loam that is just on the strong side, and to improve the fertility of this, horse or farmyard manure is the best while for light sandy ground I should choose cow-manure if I were able to procure it, as it is cooler in nature and increases the moisture-holding power of the land. In addition, a sandy soil also demands consolidation. The roots of Carnations do not like a loose soil, and it is therefore wise to tread thoroughly before any attempt at planting is made. This must not be done

and all are in the most delightful informal masses conceivable.

What is rather remarkable is the little variation that exists among the plants, many of which must be seedlings. There is, as one would anticipate, some little variation in point of the time of flowering and a little in respect of the size of flower, but the whole of the flowers may be said to be practically the same. This would point to a common ancestry, as I have little doubt was the case. They have descended, in all probability, from the original flowers brought there in the time of the ancient Priory, of which nothing now exists.

Dumfries.

S. ARNOTT.

THE GREENHOUSE.

A NEW PELARGONIUM.

ON the front cover of this issue is seen a coloured plate of the handsome new Geranium, or, to be strictly correct, Zonal Pelargonium, known as His Majesty. It is a variety that at once appeals to the onlooker, on account of its bold trusses of rich scarlet flowers. Individually, the flowers, or "pips," as they are often called, are of exceptional size, and they are borne in wonderful profusion. When shown before the Royal Horticultural Society by Mr. W. H. Page, Hampton, two years ago, it created quite a sensation, and the attention of specialists and visitors was at once riveted upon the prize. It was then that it received a unanimous award of merit, the highest award a florist's flower could obtain from this society. As an autumn and winter flowering variety it is quite the best of its colour yet introduced. It is particularly good in the greenhouse from September to June, and is a superb variety for conservatory decoration. It has a splendid habit and makes a fine pot plant; but it will be necessary to wait another season, so that its bedding qualities may be fairly and more widely tested.

Cultivation.—To grow the so-called Geranium is simplicity itself, and it would be hard to name a more popular plant for gardens of every description. For winter flowering in the greenhouse or conservatory there is no better time than the present for taking cuttings. The plants should be grown on, giving them a light, airy house or pit. At all times it should be borne in mind that the plants require an abundance of sun and air, for it must not be overlooked that the original species came from the plains of South Africa, and the plants are naturally adapted to pure air and sunshine. On no account must they be coddled, and from midsummer onwards the plants should be placed in the open on a bed of coal-ashes. All flower-buds must be picked off until the plants are brought into the greenhouse; that is to say, in September.

Zonal Pelargoniums used only for summer bedding are best propagated from cuttings taken in the late summer or early autumn. These cuttings are obtained from the plants outside when the flowers begin to decline.

LILIES FOR GREENHOUSE AND GARDEN.

THAT the amateur or beginner is ever ready and alert to receive gardening hints of a practical nature, hints which bear on their face the impress of directness and sufficient of cultural details to

pots of Lilies, though minus a near professional from whom to draw the requisite supplies of information; hence a few remarks at the present time may not be out of place.

Making a Start.—The friend to whom I have referred purchased his bulbs in March; and though for some purposes this would be accounted late, it is certainly not so for the object one has in view, and still less so when we consider the class of bulbs available. These latter are largely importations from Japan, and as they reach this country in a rootless condition, they have a strong dislike for wet soils at the start. The direct result of planting in the open ground, say, a few weeks back, would probably mean failure, either wholly or in part. At such a time the wetness, the very coldness and uncongenial condition of the soil would be sufficient almost to cause disaster; hence, from many points of view, the amateur will have gained rather than lost by the wait.

A Question of Soil.—And just as soil coldness and wetness is opposed to success in the open-air plantings of these bulbs, so is it also prejudicial to it when the plants are grown in pots. Hence the first direct hint of practical importance is that the soil be moderately dry—that is to say, so dry that stickiness or adhesiveness is unknown. Let me say at once that the usually crude soils of the garden are not suitable, and where no other exists, the beginner should get a sack of prepared soil from the nurseryman or florist. The soil should be rich, light and moderately sandy. Crude manures should be avoided.

Pots and Drainage.—Clean pots only should be used, so as to ensure, as far as is possible, healthy surroundings for the roots. This item of cleanliness is too often ignored by the amateur, though its importance is great, and a few minutes of such work is well repaid by appearances alone. The drainage, too, must be perfect, so as to preclude the possibility of stagnant moisture about the plants. Perfect drainage, too, supplies a natural warmth to the soil, which, while most desirable, is also of the

hygienic order. But let us take a few illustrations and see how best to secure the end we have in view.

Lilies of the Auratum Set.—*Lilium auratum*, the Golden-rayed Hill Lily of Japan, is one of the noblest of Lilies and one of the most prized. I had almost written "popular," and it might be this, and prized also, did greater success attend its cultivation in this country than is now the case. The many failures are largely due to the system of cutting away the roots prior to shipment from Japan. Happily, however, all the varieties of this Lily are great stem-rooters, and the fact is of the highest importance. The roots appear on the stem immediately above the bulb; hence the latter should be so placed that a majority of the roots are enabled to feed upon the soil, and assist to bring about a good flowering.

E. H. JENKINS.

(To be continued.)



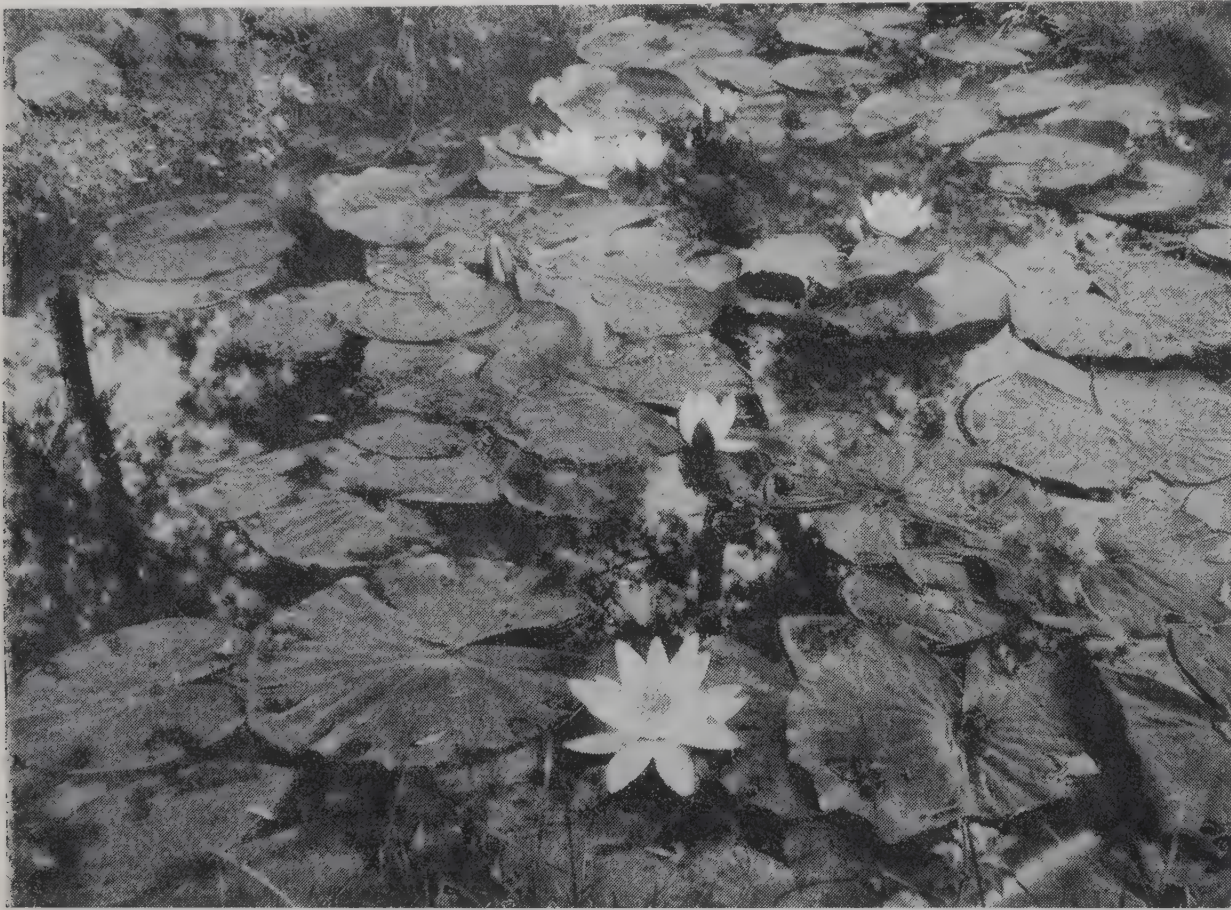
A COLONY OF SAXIFRAGA APICULATA, AN EASILY-GROWN PLANT FOR THE ROCK GARDEN. (See page 148.)

bring success more or less complete in their train, no professional gardener would attempt to deny. This much has been obvious to my mind many a time, though perhaps never more forcibly driven home than it was a year ago, when a neighbour was seized with a desire to grow some Lilies in pots. He had been fascinated by the graphic description of a friend's success, and without more ado had purchased some bulbs, hardly knowing what step to take next. He had, however, thoughts that he might get all the information he wanted at first hand from the writer, and my gardening instincts did not permit him to appeal in vain. His purchase of Lily bulbs consisted of *L. auratum*, *L. a. platyphyllum*, and some splendid bulbs of *L. speciosum* Melpomene and *L. s. magnificum*. Now, it has occurred to me that many another beginner might be desirous of indulging in a few

THE ROCK AND WATER GARDEN.

AN EARLY-FLOWERING SAXIFRAGE. (SAXIFRAGA APICULATA.)

MANY a rock garden is brightened from the early days of March till the end of April by the presence of this charming Saxifrage. It is well known to be one of the earliest to flower, and even when not in flower, its dense foliage, carpeting bare ground and clothing rocks and banks in summer and winter, makes it in every way a desirable plant for the rock garden. The flowers are pale yellow, and the illustration on page 147 gives one a good idea of the freedom with which they are produced. There is a shadow of doubt about the origin of *S. apiculata*.



HARDY WATER LILIES IN A SMALL POND.

It occurs wild in the Pyrenees, and is believed by some to be a hybrid between *S. rocheliana* and *S. sancta*. Like the last-named, it is classed among the spiny Saxifrages. It shows a decided preference for a limestone soil, and is well adapted for the sunny side of the rock garden. Unlike some species, it is not likely to become scarce in cultivation, for when given suitable conditions it grows with great freedom, and appears to be quite capable of taking care of itself.

WATER LILIES.

In gardens where a sheet of water exists it is a comparatively easy matter to grow Water Lilies. Rather shallow water is necessary. It may be deep in the centre of large sheets of water, but in this case there is usually ample space for Water Lilies near the edge, where they not only thrive better, but are more easily examined. The depth may vary from 1 foot to 4 feet, or perhaps 5 feet. At the last-named depth the building up of soil in mounds in which to plant the *Nymphæas* will bring them within a reasonable distance of the surface. This is assuming the pond or lake can be lowered to

permit of planting. Should this not be possible, plant the roots firmly in round baskets about three feet across and 1 foot in depth, lowering these into the water. The soil for Water Lilies should consist largely of good turfy loam. Add to this some half-decayed leaves and a little cow-manure. The surface of the baskets must be covered with large turves to prevent the water washing out the finer soil. *Nymphæas* thrive best in sheltered (but not shaded) positions, sun being essential to success. The water should be still and not liable to frequent changing, or the cooling of the water in summer will be detrimental. Lifting, dividing and replanting may be done towards the end of March or during April. The flowering season commences in June and lasts until October.

Water Lilies in Tubs.—Those who have not the good fortune to possess a pond or tank

suitable for *Nymphæas* need not despair of growing them. A very pretty water garden is possible with a few tubs sunk in the ground, placing rock-work round the edges to hide the rim. By this means every suburban or villa garden may have its Water Lilies. Suitable tubs may be easily secured. Paraffin casks sawn in half are favourite receptacles for this purpose, thoroughly charring the inside to remove all traces of oil before using. Pickle or treacle barrels also answer the purpose, the larger the better. A depth of at least 2 feet is desirable. This will allow for soil in the bottom and at least 1 foot of water above the Lilies. Having planted the Lily roots in the soil, place several large turves over the finer soil to prevent it rising, and fill the tubs with water. For a few days the water will be muddy, but this will soon disappear. The gradual waste of water during the summer must be replaced, preferably with chilled water.

Varieties to Grow.—A dozen of the best varieties for lakes and ponds may be selected from the numerous varieties in commerce as follows: *Gloriosa*, dark red or crimson flowers 6 inches

to 8 inches across; *alba candidissima*, white; *Colossea*, light flesh pink; *gladstoniana*, very large, pure white; *James Brydon*, rose crimson; *Marliacea alba*, *carnea*, *ignea*, *rosea* and *chromatella*; *William Doogue*, pink; and *William Falconer*, darkest red. A selection of smaller-growing sorts as follows will be preferable for tubs: *Laydekeri rosea*, *fulgens*, *lilacea* and *purpurata*, *pygmæa* (white) and the yellow variety, *Helvola*. The *Marliacea* set already mentioned are excellent for large tubs. A. O.

THE FRUIT GARDEN.

PEACH AND NECTARINE TREES.

YOUNG trees which have been recently planted will need to have the soil over and about the roots thoroughly firmed previous to finally securing the young shoots to the walls or trellises. I am no advocate for hard pruning young trees, but attention in this respect requires good judgment, and should be regulated according to the state and conditions of the trees at the time they are planted, so as to form the groundwork of an evenly-balanced head.

I think it almost needless to remark, except for the inexperienced, that the main point to be observed in training the Peach and other trees is the maintenance of equality of vigour and growth on both sides of the trees; and the greater care used in preventing any material derangement of the equilibrium, especially during the early stages of development, the more easy will the trees be subsequently managed.

Disbudding is the next consideration, and is one of the most important items of fruit garden labour which should never be left to the inexperienced. This consists of the removal of ill-placed new growth, which, if allowed to remain, would prove very harmful to the trees. I usually remove all growths coming straight from the wall and those behind the branches the first time of going over the trees, keeping the eye on all shoots wanted to build up a good foundation, and as these advance in growth they are neatly tied to the wires or tacked to the walls, taking great care not to tie them in tight enough to bruise the green wood. If the young trees are gone over about three times and the young shoots reduced to the required number, very little further attention will be necessary during the first year, with the exception of keeping the foliage clean and healthy and new growths secured in the desired positions. When rubbing off or pinching the shoots not wanted, it is most desirable to retain on the upper side of the older wood the first strong break, then a few alternately and the leaders.

I have for many years taken a keen interest in Peach culture, and if well looked after I invariably find the trees crop as regularly as, or more so than, is the case with any other kind of fruit. Protection in some seasons may not be desirable, but in our fickle climate it is well to be on the safe side.

Glass coping and blinds are probably the best means of saving the blooms during sharp weather; but in the absence of these, much can be done by using two or three thicknesses of fish-netting, or by placing at intervals a few pieces of Portugal Laurel behind the branches.

Wrotham Park, Barnet.

H. MARKHAM.

GARDENING FOR BEGINNERS.

SUCCESS IN SEED-SOWING. WHAT TO DO AND HOW TO DO IT.

THE amateur who possesses only a cold frame, or possibly an unheated greenhouse, for the raising of seedlings is often discouraged. It

more seedlings under cool conditions than anything else. The boxes ought to have holes three-quarters of an inch or 1 inch in diameter in their bottoms, five holes not being too much for a box measuring 15 inches by 12 inches. Over these holes a layer of broken pots, or crocks as they are termed, must be placed, then some rough fibrous material, and, finally, the fine, sifted soil. Fig. 1 shows a box with one side removed. Note the crocks and rough and fine soil. This is a large box; consequently a dividing board is placed across the centre so that two kinds of seed may be sown in it, one at each end.

Soil for Seed-Sowing.

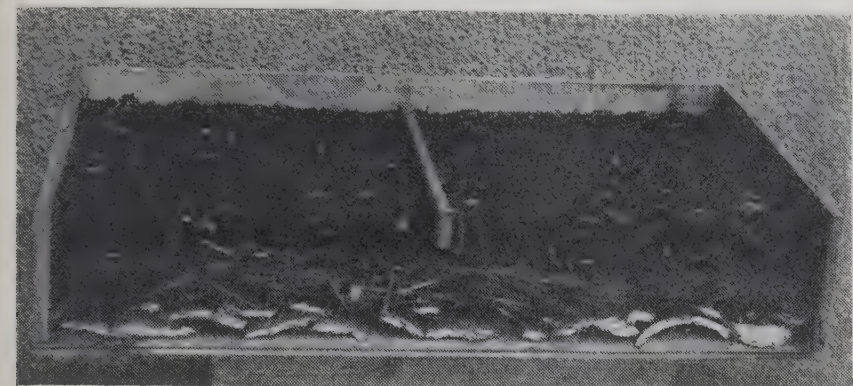
—This is quite as important as the drainage. For the majority of the seedlings that the average beginner is likely to want to raise, the following mixture will answer well: Good turfy loam, well chopped and passed through a 1-inch meshed sieve, two parts; leaf-soil, well decayed and sifted through the same sieve, half a part; and coarse sand, half a part. Retain the coarse material that is left in the sieve for placing over the drainage. In some localities it is difficult to procure turfy loam, but every endeavour to do so should be made, as there is no good substitute. With leaf-soil it is different. Coconut fibre refuse or Hop Manure may well take its place. Having placed the drainage and soil in position, as shown in Fig. 1, press the whole down gently with the presser shown at the right of Fig. 2. The edge of this is useful for making lines when it is desired to sow the seed in rows.

Sowing the Seed.—If there is one thing more than any other that the beginner needs warning against, it is thick sowing. No matter how often this warning is given, it is seldom fully accepted, and thousands of seedlings are wasted every spring by too thick sowing. Seeds differ very considerably in size, and it is not difficult to place the large ones separately, as is shown at the right of Fig. 2. Very small seeds are difficult for the beginner, who may be excused for sowing them too thickly. As an aid to the thin sowing of these small seeds, mix them with some dry silver sand, as shown at the left of Fig. 2. This will make a greater bulk and, if the mixing is well done, will ensure a thin and even distribution.

Covering the Seed.—After the seed is sown it must be covered. Here, again, there is a great deal of difference to be observed. Thus, very small seed, such as that of Petunia, will only need pressing into the soil with the presser shown in Fig. 2; while that of Asters, Zinnias and African and French Marigolds will need a quarter of an inch thick covering of fine soil. The larger the

seed the greater the depth of soil for covering is a good general rule to follow. Do not press down the covering soil except just to make it level, and it is well to have rather more sand in it than is used for the mixture previously advised for sowing.

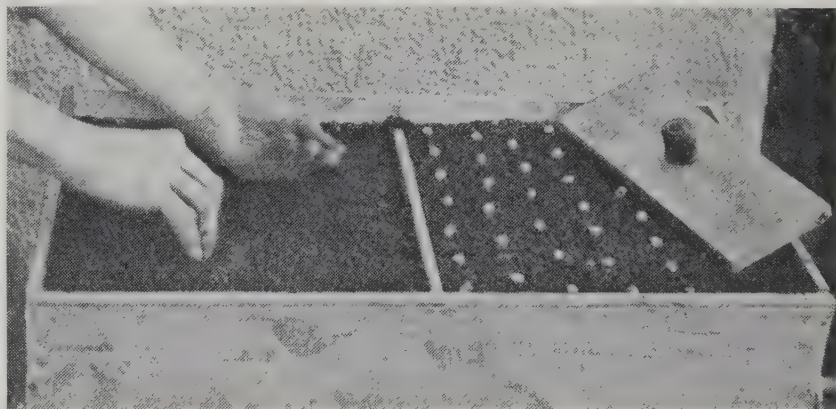
Watering.—It is no uncommon occurrence to find choice seed that has been carefully sown washed out of the seed-pans or boxes during the process of watering, or, if not actually washed out, carried all to one side, owing to the receptacle not standing level. Therefore, stand all seed-pans, boxes or pots as level as possible and use a fine rose on the watering-can. For very small seeds a sheet of paper, freely perforated with holes, as shown in Fig. 3, may be laid over the soil before watering, or a piece of coarse muslin may be utilised in the same way, although this is apt to adhere to the soil. Pots and small pans can be immersed nearly to their rims in a bucket of water, allowing the liquid to saturate the soil from below upwards. After the sowing and watering are completed, keep the frame or house fairly close until germination has taken place, after which ventilation must be



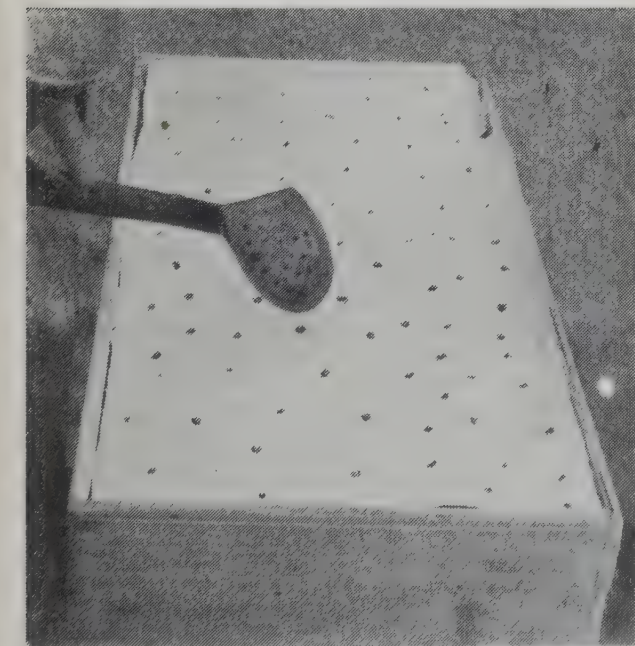
1.—SEED-BOX WITH SIDE REMOVED, SHOWING DRAINAGE IN BOTTOM COVERED WITH ROUGH MATERIAL AND FINE SOIL ON THE SURFACE.

may be that in former years failure has courted all his efforts, and instead of having bounteous displays of half-hardy flowers, the majority of his plants have never got beyond the seedling stage, if, indeed, the seed has germinated at all. That a little artificial heat is a great aid in the raising of half-hardy annuals, as well as such kitchen garden crops as Tomatoes, no one will deny. Yet it is by no means indispensable. Indeed, seedlings raised in a cold frame or greenhouse by amateurs are usually more sturdy and better in every respect than those raised by inexperienced cultivators in artificially-heated structures.

Boxes and Seed-Pans.—The receptacles in which the seed is to be sown need to be selected with some care. Boxes or pans 3 inches or rather more in depth are preferred by many; but where only a little seed of a kind is needed, an ordinary flower-pot, 5 inches or 6 inches in diameter at the top, answers well, and does not take up a lot of room. Whatever is used must be scrupulously clean and have ample outlet at the bottom for waste water; stagnant moisture in the soil kills



2.—LARGE SEEDS CAN BE PLACED SEPARATELY, AS SHOWN ON RIGHT; MIX SMALL ONES WITH DRY SAND TO ENSURE EVEN SOWING. THE PRESSER ON RIGHT WILL MAKE SOIL LEVEL.



3.—TO AVOID WASHING SMALL SEEDS OUT OF SOIL, WATER THROUGH PERFORATED PAPER OR COARSE MUSLIN.

afforded as freely as outside conditions will admit. Give water whenever the soil is at all dry, but avoid overdoing it. Remember, seedlings in an early stage do not want large quantities of water; but, on the other hand, they must not be allowed to become dry. Subsequently they will need transplanting, and this will be dealt with in the course of a week or two.

HOW TO GROW LARGE MARGUERITES.

By large plants I do not mean those that are tall and possess long, leafless stems, but those that are very bushy and compact. Marguerites are invaluable plants for tubs, vases, window-boxes and pots, as well as for bedding-out in the summer. Plants that were potted in January and the early part of February should now be repotted into pots 1½ inches larger. It is really wonderful what good progress they will make when so treated, and these specimens are the best for vases, large tubs and window-boxes. It is a mistake to subject Marguerites to great heat at any stage of their growth. Cool frame treatment is the best; ventilate freely and only cover the lights to keep out frost.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Greenhouse.

Spiræas.—*Spiræa astilboides* and the newer pink varieties Peach Blossom and Queen Alexandra may be started at intervals in a warm house. Avoid overpotting. Once they have started into growth they must not be allowed to suffer for want of water. As they dry up very quickly, it is well to stand the pots in saucers, keeping the latter filled with water.

Seedling Cyclamen.—Encourage the young plants to grow in a warm house with a moist atmosphere, and keep them near the glass to induce a sturdy habit. Syringe freely and lightly. Keep a sharp look-out for thrips, which soon cripple the foliage. Fumigate if necessary.

Hydrangea paniculata grandiflora.—If a few plants of these are placed in a warm house, they will make good flowering plants. Prune back last year's growth to a few buds of the base. An early forcing-house will bring them along nicely.

Polygonatum multiflorum.—A few roots lifted of this plant may easily be had in flower in advance of those out of doors, and the subject forces readily. When growing freely, give plenty of water.

Schizanthus.—Few greenhouse flowers nowadays are more popular. They are easily raised from seed, and by sowing batches at intervals may be had in flower nearly the whole year round, and the different varieties provide a range of colours unequalled. Plants growing freely which have filled the pots with roots will benefit greatly by applications of manure-water. Pot on younger plants as becomes necessary, and whatever stage of growth they are in, attend to the proper support of the plants.

The Kitchen Garden.

Rhubarb.—If it is desired to increase the stock or make new beds, the work should be done without delay. Select a piece of ground that has been well dug and liberally treated with manure. When planting, remember that much space is required when in full growth, and 4 feet between the rows and the same distance between the plants will not be too much. Plant good crowns singly and make very firm.

Forcing the Growth.—Cover some of the crowns on permanent beds with large pots or other receptacles from which light is excluded, and place some fermenting material round them.

Seakale.—As soon as the weather permits of planting being done, the sets or root-cuttings will need putting out into the open ground to make material for forcing next winter. An open site suits this crop best. Insert the cuttings with a dibber in rows 18 inches apart and 1 foot between them.

Vegetable Marrows.—Make a sowing now of these for planting out later in portable frames on hot-beds. Sow the seed singly in small pots and raise in a brisk heat. These may subsequently be potted on before planting out permanently.

Leeks.—Make a sowing of these and raise in a cool house for providing later supplies.

Broad Beans.—A sowing may be made on a warm border as soon as possible now, or raised in boxes and planted out when nicely germinated; Peas may be treated in a similar way.

Cauliflowers.—Providing they have been thoroughly hardened off, a batch of plants may be placed on a warm border; but if the protection of hand-lights, or even a few Spruce boughs, can be given them for a time, growth will be considerably accelerated.

The Flower Garden.

Iris Kæmpferi.—This beautiful subject should be planted without delay. In many places this does equally well in drier spots, though it certainly is best known as a subject for the water's edge. Treat the ground liberally with manure and deeply work it; then it is possible to include it in the herbaceous border.

Hardy Annuals.—In warm positions a sowing of suitable varieties may be made when the ground is in perfect order for so doing. Knock down the surface with a fork and sow thinly.

Alpine Auriculas.—Seed may now be sown of these lovely flowers, and if purchased from a reliable strain many good varieties will emanate. A word must be given here as to watering seedlings, which

I do not think I have previously mentioned, and especially with fine seeds. Though a very fine rosette can be well suited, it is better to stand the pans or pots nearly to the rim in water until the whole of the soil has become thoroughly moistened.

Seedlings.—Transplant seedlings of Phloxes, Pentstemons, Delphiniums and other perennials when large enough into other boxes, and grow on in a cool frame. For a time keep them fairly close and avoid too much humidity; but when they have recovered from the shift, gradually give more air.

Verbenas.—Pot off the cuttings of these singly into small pots when nicely rooted, and in a week or two stop them at the point to encourage a branching habit.

Fruits Under Glass.

Early Vines.—For the present sufficient air will be afforded through the top ventilators without having to resort to the front ones, the opening of which is liable to cause draughts, except on very warm days.

Thinning.—This operation needs careful consideration and care in doing, and depends much upon the variety in question. For early Grapes it is best carried out twice over. The first time remove all small and badly-placed berries and those inside the bunch. If the shoulders are left, these should be neatly looped up to the trellis with twisted strands of raffia. A mat placed underneath the bunches will ensure cleanliness.

Successional Vines.—As the growths strengthen and it becomes necessary to tie them down, this must be done gradually, otherwise these may snap out at the base. It is best done in the morning and a tie made with a slip-knot, so that it can be untied later and the shoot brought down lower.

Cucumbers.—Encourage these to grow freely by maintaining a warm, growing temperature and syringing twice daily when the weather is bright. Attend to the stopping and tying of the growth as this becomes essential. Fertilisation of the flowers is unnecessary.

Early Peach Trees.—To keep the trees shapely for another year, the young growths as they mature must be regularly trained. The first tie should be made as near the base as possible, and secured to the last year's growth. Thinning of the crop should not be too rigorously carried out until the stoning period is past, and must always be done in a gradual manner. Give the trees water as necessary, and especially where the borders come in close proximity to the hot-water pipes.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Indoor Fruit.

Figs.—These will be starting growth anew. All they ask for at present are a not too dry atmosphere and a much warmer temperature than Vines at the like stage, 60° at night being suitable, with a proportionate rise in the daytime.

Muscat Vines.—If started six weeks ago, the growths will be sufficiently advanced to permit of a reduction. These, if in good condition, "show" far more bunches than the Vines can carry, and, therefore, all the shoots that are obviously below the average strength may with advantage to the health of the Vines be removed.

Late Varieties.—Lady Downe's may now be kept warm enough to induce growth, but there is no need to apply fire-heat for that purpose. The buds will break much stronger if allowed to come away slowly. Alicante, another easily-grown Grape, may be treated in the same way, only it grows faster and may ask for more attention as regards early closing.

The Kitchen Garden.

Broccoli.—In fine weather the heads will turn in daily and want attention accordingly.

Cauliflowers.—Those potted up from early sowings, if well rooted, may have the water with which they are moistened slightly strengthened with soot or sulphate of ammonia. Give abundant ventilation.

Spring Cabbages.—An early dish may be looked for now or soon. Meanwhile stir the surface soil when dry, and before doing so apply a dessert

spoonful of artificial manure to each plant. Pigeon-manure is also of much benefit sprinkled between the rows.

Celery.—What is left of the crop may be lifted, should the ground be wanted, and stored in sand in a cold shed, standing the heads upright, of course. Seedlings are, perhaps, ready to prick out, and where a large quantity of Celery is grown, it is best to set apart frames for the purpose. A compost of equal parts of soil and Mushroom-bed refuse laid in the bottom of the frame to a thickness of 2½ inches or so when firmed suits them. A space of 3 inches to each plant is needed, and once moistened, the compost absorbing a good quantity, no water will be required for some time. The later batch should be kept quite cool.

The Flower Garden.

Narcissus.—A slight sprinkling of superphosphate of lime between the rows will help the bulbs for next year.

Hellebores.—The early-flowering kinds now going over should have all the decaying foliage and decayed stalks removed, and a mulch of manure applied to the surface to strengthen the new foliage, and so obtain good crowns.

Schizostylis coccinea.—This useful plant should have the beds often renewed, not longer than two years to elapse between. In Scotland it asks for a warm, sheltered position somewhat dry; but it is essential to provide the ground with a liberal supply of rotted manure to carry the plants through the summer. Plant only the strongest unflowered growths.

Romneya Coulteri.—The partially-ripened late shoots have been damaged considerably, and these should be cut down quite close to the ground, undamaged ones being left unpruned. It is a mistake to leave all wood, which weakens the plants and is at best of slight value for flower production.

Gladiolus.—In the less cold districts planting may be proceeded with in the various sections which flower in autumn. Very late kinds, such as Baron J. Hulot, slightly started may also be planted, though in late localities it would be better to refrain from doing so for some weeks, the plants meanwhile being allowed to grow slowly in a cool structure or frame.

The Greenhouse.

Tuberoses.—Potted at once, three in a 6-inch pot and grown coolly, a nice lot of flowers will be obtained in autumn and the early part of winter.

Plumbago rosea.—If no cuttings are to be had or are deficient in quantity, the stems cut into short lengths, each with an "eye," root freely and produce nice flowering plants by December. This is a hot-house species and invaluable for table decorations.

Lobelia Kathleen Mallard.—Though this variety is unsatisfactory for flower gardening, it is charming as a pot plant for the conservatory, and enough cuttings, which will root in a few days, to make up the required number of pots should now be taken. Several, when rooted, may be planted in 5-inch and 6-inch pots, which they will soon fill and become smothered in bloom.

Mimulus glutinosus.—This plant provides a distinct colour in the greenhouse during the summer months, and nice specimens may be grown in 6-inch pots and quite large ones in those two sizes larger. This is the time to pot on established plants, those in the former size into 8-inch pots, while those in 8-inch pots should be turned out, the ball of each considerably reduced, and repotted in the same size. One stick is enough to support each plant, which should not be too trimly tied in.

Roses.—Those in houses with a little heat are now well forward and will need close attention to keep green fly from gaining a footing. Fumigation is the best preventive and remedy, and much to be preferred to constant syringing. The plants will consume large quantities of water strengthened with dried blood in the proportion of 1oz. to four gallons of water.

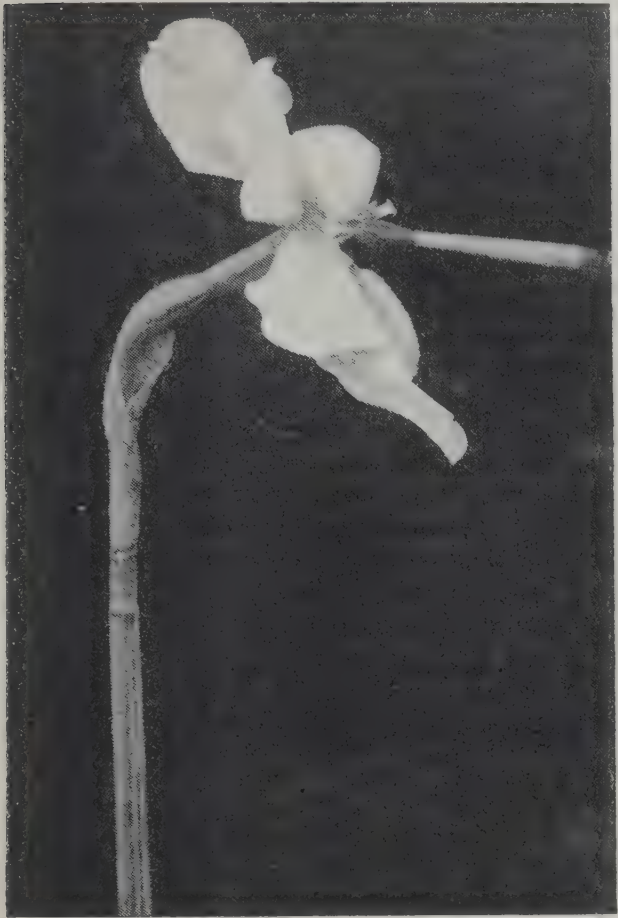
Topiary Work.—Variegated Yews and other shrubs should be trimmed. The Roman Cypress also should be trimmed at the same time. None of the usually shorn subjects thrives better under the shears than this, those cut in autumn being more than ready for shearing again. It is the finest of all evergreens for pillar specimens. Green Yews if pruned in autumn need not be trimmed now.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

HYBRIDISING DAFFODILS.

EVERY year, if a census could be made, it would be found that the number of Daffodil enthusiasts is increasing. Sooner or later a large proportion of the new-comers want to begin to try to raise some seedlings of their own. Over and above the pleasure of seeing our own seed develop and in a few years' time grow into



1.—TAKING POLLEN FROM THE ANTHERS WITH A CAMEL-HAIR BRUSH.

a flowering plant, there are such infinite possibilities of colour, size and form, which tend to make us as keen as mustard to try our hand at this fascinating pursuit. The beginner has only to get over the first three or four years of waiting, and then, if he crosses or hybridises every season and sows the seed every July, each successive spring will give him an interesting and, it may be, a profitable harvest.

I strongly advise everyone who has any Daffodils at all to make a start and to remember that the well-known saying, "No time like the present," is peculiarly applicable to the would-be raiser of Daffodil seedlings. Do not lose a year if you can help it. Begin straight away in the present year of grace. Cross-fertilise; if you can, hybridise. Now, a little timely preparation will assist matters considerably; hence this note of warning.

First.—Think what you want to do, that is, what types of flower you are going to try for. Remember that a trumpet crossed with a Poet produces an incomparabilis or a cupped variety; a Poeticus crossed with a Tazetta, a Poetaz; a white trumpet with a small-cupped Leedsii, a giant Leedsii; a white trumpet with a Poeticus, a Leedsii; an incomparabilis with a Poeticus, a Burbidgei. It is not necessary, however, to keep to these stock crosses. I fancy there is no limit to the crossing that may be done, and the more unconventional it is, the greater the chance of some

novelty. If anyone has not many varieties to make many crosses, I think it might be worth while to try to get a few pods of seed from putting the pollen of one variety on to the stigma (top of pistil) of another flower of the same kind. This is strict cross-fertilisation, and the progeny ought to have great vitality. But to get hybrids it must be borne in mind that the flower from which the pollen is taken must be of a different species from the one on to whose stigma it is put.

Secondly.—The mechanical means by which this is carried out is shown in the illustrations on this page. In both flowers the trumpet or cup has been removed, so as to expose the pistil (the centre organ, the top of which is called the stigma) and the stamens (the circle of organs round it, with large ends—anthers), which in time burst and set free a large amount of fine dust (the pollen). The object of the hybridiser is to convey the pollen from one flower to the stigma of another of a different type. It is done by means of a camel-hair brush, which may be slightly moistened in one's mouth and applied to the burst anthers to collect some pollen, which is then applied to the stigma of another flower. In order to preclude any chance of self-fertilisation, the anthers of the seed-bearer (the pistil-bearing or female flower) must be removed *before they burst*, as shown in Fig. 2. Another thing to remember is that pollen will keep good for ten days or more if it is kept in a perfectly dry little box with the lid just tilted so as to admit a little air. Common pill-boxes do excellently for the purpose. After the cross is made, it should in some way or another be noted either by a little label or a stick attached to the seed plant. We then know what the seed is when it is gathered.

Thirdly.—The stock-in-trade is not very much, but it should be ready. This is it: One pair of small, finely-pointed forceps for taking off the anthers before they open; one or two small camel-hair brushes for conveying the pollen; half-a-dozen or a dozen small common pill-boxes for holding pollen; raffia or wool; some labels and sticks (I use the latter only myself, and put one to each fertilised flower with the name or number of the pollen parent on); and a note-book.

Lastly.—It must be remembered that the best time to carry out these operations is between 10 a.m. and 4 p.m. on a bright, warm, sunny day; but as beggars cannot be choosers, we have very often to operate without these ideal conditions being present. It is best in cold and sunless weather to try to repeat the cross and apply the pollen more than once. Again, be most particular about having both the camel-hair brushes and the pill-boxes very clean. The pollen grains are so small that one cannot be too particular. When the seed-pod is swelling, we cannot help wondering what it will contain; but I must prepare beginners not to expect every big pod to be full of nice, shiny black seeds. Alas! again and again the promise has been one thing and the result another. A last word must be, Watch very carefully for the time when the pods begin to turn yellow. When this happens, I make a tiny incision, and if the seed within is black, I know the time has come when it may be gathered. I then take off the pod with an inch or so of stem and place it in an open cardboard box in some dry place, where it remains until it has opened and the seed has been shed.

J. J.

DAFFODIL NOTES.

The Mild Winter.—My old friend Mr. W. B. Hartland sent me as long ago as last January a Daffodil bloom which had been picked in the open at Ard-Cairn on January 16. It looked like a seedling from Daniel Dewar. This must be a record even for mild Cork, for he wrote (and he has now passed the Psalmist's three score and ten years) that he had never picked a bloom from the open so early before.

The Effects of the Hot Summer.—Trumpets and Poets, from their behaviour in pots, have stood it well, and have, I think, benefited by it. Other kinds seem to have felt it severely. Seagull, Evangeline, Southern Star, Castile and many others which are usually to be relied upon as being good pot plants are small, and have weaker stems than usual. Blackwell stands out as one of the exceptions, and so does Eyebright. The diminution in size may be partly accounted for by the abnormal quantity of "grass" that the bulbs have thrown up. Even single-nosed bulbs, which I carefully picked out and noted on the labels as such, have obviously split up and given a good deal of foliage. This means smaller flowers. Why, however, should the heat cause it? It would be interesting if growers would give their experience in this respect.

Daffodils Under Glass.—In the week before the Spring Bulb Show it was my good fortune to see what was to be seen at Messrs. Cartwright and Goodwin's at Trimpley, near Kidderminster,



2.—THE POLLEN TAKEN FROM FIG. 1. IS TRANSFERRED TO THE STIGMA OF THE SEED-BEARING FLOWER AS SHOWN.

and at Mr. Walter T. Ware's at Inglescombe, near Bath. Needless to say, I had a great treat. I came away with two outstanding impressions—first, that the best thing for red-edged Daffodils is to bloom under glass in March before the sun has too much power. They do not burn then, and their beauty lasts until "their dying day, Sir," very different from what, alas! we know happens

outside. There they are more sensitive than the most delicate complexion. The other point was the value of a cool house for keeping them in when they are fully or almost fully out. My own that answers to this description is always full of *Lachenalias*, and I have to keep them where they are a little too warm. I am a loser in this respect, for it is very wonderful what a time they may be kept if the position is not a very sunny one, or if a certain amount of shading is done on very bright days. Two excellent plants for this purpose are *Blackwell* and *Eyebright*. *Seagull*, which is equally good, has this year not been up to its usual form, and, as a rule, has been poor and small. As an early trumpet I am very partial to *Stromboli*. It is a good firm flower, with a yellow trumpet and a pale primrose campanulate perianth. It is a fairly large bloom and, as far as my experience goes, always comes early. *Olympia* I saw at Mr. Ware's. I have had my eye on it for some two or three years, and as a real big thing in the way of trumpets I can confidently recommend it. It is a rough flower and of no use for showing, but it appeals to the uneducated Daffodil eye by its very unevenness; at least, our semi-educated parish schoolmaster spotted it among all my nice flowers as the one he liked best. "Why?" I asked. "Because it is not so even as most of them," he answered.

Bulbs After Flowering.—I find that if good-sized pots have been used, and if they have not been crammed with bulbs, with very little care the bulbs may be ripened off in them without being turned out. I half bury mine in light soil, so as to conserve moisture for the roots. They are put close together and the spaces at the bottom carefully filled up. Then they can be left where they were put until the foliage has died down. The main point to remember is to keep them constantly supplied with water. It is a good thing, too, to leave the supports for the foliage in the pots. The leaves are naturally weak, and they are benefited by being kept as upright as possible.

JOSEPH JACOB.

THE EDITOR'S TABLE.

Chinese Primulas from Stourbridge.—Messrs. E. Webb and Sons, The Royal Seed Establishment, Wordsley, Stourbridge, send us flowers of their strain of Chinese Primulas, and these are of exceptionally high quality. In addition to the individual blooms being large and of superb form, they are of extra good substance, and the many charming colours render them particularly valuable for the conservatory and dwelling-house at this season. Among those sent we were particularly pleased with *Rose Queen*, *Eclipse* (a charming shade of purple crimson), *Ruby Queen*, *Avalanche* (white), *Meteor* (salmon rose) and *Blue Bell* (a most pleasing shade of blue). Messrs. Webb have devoted many years to the improvement of the Chinese Primula, and their strain is now, we think, one of the best in the country.

New Freesias from Haarlem.—Mr. C. G. Van Tubergen, jun., Zwanenburg, Haarlem, sends flowers of his beautiful new Freesias. We have on previous occasions referred to the beauty of these flowers and the wide colour range they cover, and the examples sent to us now are even more beautiful. These include *Conquest*, a lovely shade of rose purple; *Robinetta*, nearly blood red; *Fraicheur*, very soft rose; *Gem*, pale lilac and cream; *Heliotrope*, dark heliotrope; and

Gold Mine, very rich golden yellow. In addition to their exquisite colours the flowers are of good size, and equally as fragrant as the well-known *refracta*.

Carnation Wivelsfield Wonder.—Messrs. Allwood Brothers, The Nurseries, Hayward's Heath, send us flowers of this new Carnation. It belongs to the Perpetual-flowering section, and the beautiful flowers are white, daintily flaked with carmine. The calyx is sound and good, and the stem strong and of splendid length. Unlike many Carnations of recent introduction, *Wivelsfield Wonder* is deliciously fragrant; hence it is a desirable variety for growing where scented Carnations are appreciated.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

ANEMONE (Z. M.).—The Anemone is one of the pink-flowered varieties of the Poppy Anemone, the *Anemones de Caen*, for example, that are so largely sent to England in the early months of the year. These Anemones are quite good and reliable in light soils; but in heavy soils, or those retentive of much moisture, they rarely succeed. The tubers are sometimes planted in the spring to flower in summer. The idea has never become popular, because of the wealth of beauty and variety other plants afford at that season.

DAFFODIL BULBS GONE WRONG (Mrs. S.).—The Daffodils were probably damaged before they were planted in the autumn. A good many bulbs suffered from exposure to the heat of last summer, and others were apparently from the same conditions attacked by the fungus *Fusarium bulbigenum*. Decay has proceeded so far in the bulbs sent that it is not now possible to say exactly what was the actual cause of the damage in the first instance. It has certainly been assisted since by eelworms, springtails, bacteria and saprophytic fungi; but, so far as we are able to see, neither of these was the first cause. It was evidently also nothing to do with the cultivation they received.

ROSE GARDEN.

ROSE CELESTIAL (F. W. T.).—This Rose is found among the group *Rosa alba*. It is grown by a few Rose-growers. Try Messrs. W. Paul and Son, Waltham Cross. When you say it was always in bloom, you cannot mean continuously, for it only blooms in summer, and is not an autumnal bloomer.

PRUNING OF OLDER ROSES AFTER TRANSPLANTING (A. H. P.).—It would never do to prune such plants as severely as is recommended in the case of newly-planted young ones. The best plan to adopt where the plants have three or four old growths is to cut one or two of these down to the ground level, then prune last year's growths that spring from the two old growths remaining. If you cut back old growths, it is too severe a strain on the vitality, and they would remain in a sort of "sulky" condition for some time; but by doing as recommended, you may, and probably will, obtain new growth from the base. The next year cut back another old growth, and again the next year, when you will have got the plant into a more healthy state with plenty of young wood. The lower you cut the old wood the better it will be in the future, as you will have young wood, which, in its turn, may be cut back hard. In the case of Tea Roses and some Hybrid Teas, they are so very excitable that if you cut all old growths back hard you would, no doubt, obtain some new growths towards the autumn; but we do not advise this plan. Wherever the old wood is pliable enough, bend the growths as low down as you can without snapping them, then secure them to a peg in the ground.

Such a plan will encourage a fine lot of new basal growths, which will eventually yield the best Roses. Where the plants have only one growth, you must prune the last year's wood in that growth, cutting it back to within about four inches or five inches of its base, or, in other words, where it starts from the old growth.

WICHURIANA ROSES WITH DEAD GROWTHS (A. H. S. S.).—We should say that the drought of last summer is the cause of the growths going wrong. Of course, it may be that the insecticides used were too strong, but we should say our first surmise is the correct one. Roses upon banks, no doubt, suffered a great deal; in fact, the wonder is they kept alive, because one cannot water effectually when Roses are planted on a slope. The best plan will be to cut out such growths, and as they are so vigorous, they will soon make amends for it.

PRUNING VARIOUS ROSES (L. A. H.).—The variety *Juliet* you must not prune too severely. The plant having growths about seventeen inches long should have these reduced to about twelve inches or even fifteen inches. The other Roses, all of which were planted in October, must be pruned severely this season about the end of March. Next year you can adopt a more moderate system of pruning. Nos. 2, 21, 34 and 35 cut back to about eighteen inches from the ground, and all the other bushes to within 3 inches or 4 inches of the ground. The standards should have their growths shortened to about three inches, or four inches, taking, care in all cases, both for dwarfs and standards, to cut to an eye looking outward.

ROSE BLOOMS FAILING TO EXPAND (R. M.).—The Rose sent appears to be one of those very hard openers that are not worth growing. Certainly it should have greater heat. A variety like this requires a strong temperature; then perhaps you would get it to unfold. You could hardly expect it to do much this spring after having shaken it well out last December. Perhaps when its roots have laid hold of the soil it will open better. Why not bud another good sort upon it? You could do this next month very well. Insert buds in a number of growths made this year; then in autumn cut away all the growths up to the buds and remove any not budded. A good sort to rebud the plant with would be *Lady Roberts*, as this Rose does well under cool treatment. You could obtain buds by purchasing now young growing plants in 5-inch pots.

BASIC SLAG AND OTHER FERTILISERS FOR ROSES (W. E. T.).—Basic slag is a cheap and efficient manure, and should be largely used in gardens when ground is being trenched; but it is very slow in action, and should be applied in early winter to obtain the effect next season. We do not consider you need apply any further fertiliser just now to your newly-planted Roses. You say you gave them some bone-meal as well as the basic slag. Later on, say the end of May, you could give them some weak liquid manure made from cow-manure and soot, varied, if you can get it, by sheep-manure, a most excellent article. It is a great mistake to give newly-planted Roses too much manure. If this is put into the soil, they are compelled to take it, and serious damage to the young shoots often follows. If you do not care to take the trouble of applying the liquid manure, put a supply of cow-manure around each plant at the end of May, when the rains will carry down the nourishment, or you could apply the liquid over it. In this case it is best to slightly remove the soil around the plant, put in the manure, and then cover it with soil. Next season, the plants being established, you would do well to give them a dressing of *Tonk's* manure in February in addition to some farmyard manure, which should be forked just beneath the surface soil in November. *Tonk's* manure is made as follows: Superphosphate of lime, twelve parts; nitrate of potash, ten parts; sulphate of magnesia, two parts; sulphate of iron, one part; and sulphate of lime, eight parts. Apply at the rate of 4oz. to the square yard in February. In the case of established Roses having received basic slag in the autumn, we should advise a good dressing now of farmyard manure, and see that it is dug beneath the soil at once. If unable to obtain such manure, a dressing of *Wakeley's Hop Manure* may be given.

FRUIT GARDEN.

CHERRY TREE ON WALL (Geo. H. P.).—You say your tree is very healthy in every way. That being the case, we do not think it is necessary to add much stimulating manure to its roots. The best thing for you to do in the first place is to give the tree a good soaking of manure-water now. That from the stable or cowyard in a slightly-diluted form is the best, and then in a week's time give it a similar watering with lime-water. To prepare the lime-water, place two pecks of fresh lime in an eighteen-gallon cask, tub or some other vessel, and then fill with water, thoroughly churning the lime and well mixing with the water. Let it stand twenty-four hours until it is clear; then pour the clear water into another vessel and water the tree with this only, digging the sediment into the soil of the garden. As soon as the soil has again become fairly dry, spread some bone-meal and lime thinly over the surface of the soil, fork it into the soil 4 inches deep, and then place a mulch of partly-decayed manure, 3 inches deep, over the surface of the soil as far as the roots extend. If you keep bees, place a hive near the tree while it is in bloom. If you do not, tie a rabbit's tail to a stick and draw this gently over the blooms every sunshiny day about noon until the flowers are ready to fall. This helps to bring the pollen in contact with the stigma of the flower (embryo fruit), without which contact fertilisation cannot take place. We hope this treatment will be the means of securing you a full crop of fruit.

THE GARDEN.

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MARCH 30, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Deciduous Cypress.—In the gardens at Syon House, Brentford, are to be seen some of the finest specimens of *Taxodium distichum* in cultivation. There are about a dozen trees, the finest being planted in damp soil near the lake. According to the catalogue of the trees and shrubs of these gardens, compiled by A. Bruce Jackson in 1910, the measurements of the finest tree are 111 feet by 12 feet, and this is probably the tallest *Taxodium* in Europe.

A New Hybrid Forsythia.—Among the several species and varieties of *Forsythia* flowering at the present time, *F. spectabilis*, a hybrid of Continental origin, is prominent. It is one of the forms of *F. intermedia*, which is a hybrid between *F. suspensa* (Fortunei) and *F. viridissima*. There are at least two other somewhat similar forms—*F. densiflora* and *F. vitellina*. *F. spectabilis*, however, is a golden yellow, quite the richest coloured of all the *Forsythias*. The flowers are large and very freely produced on the branches.

Saxifraga apiculata.—This free-flowering *Saxifraga* is rendering a good account of itself this season. Not only is it a capital plant for the rock garden, but it is one of the best *Saxifrages* for carpeting beds where taller plants are grown. It is singular that the origin of so valuable a plant should be shrouded in mystery. It is generally regarded as a garden hybrid, and *S. sancta* is credited with being one of its parents. In "Nicholson's Dictionary of Gardening" it is given as a native of the Pyrenees. The fact that it does not produce fertile seeds points to hybridism.

The Mediterranean Heath.—This is a delightful Heath to plant freely in the warmer parts of the country. Being a native of the south-west of France and Spain, *Erica mediterranea* is not hardy in all parts of the country, though in the London district, further South and on the West Coast the plants are very rarely seriously injured by frosts. The flowering season extends from March to May inclusive. During this time the bushes, 3 feet to 5 feet or more in height, are laden with the small reddish mauve blossoms. Two notable characters of the flowers are the prominent dark anthers and the delightful fragrance. There is also a white variety.

A Rose-Coloured Pasque-Flower.—One of the most interesting hardy plants shown at the Royal Horticultural Society's exhibition on the 19th inst. was a rose pink flowered variety of the Pasque-flower, *Anemone Pulsatilla*. This plant is naturally variable, but hitherto its variations in colour have been confined to shades of blue and white. The new-comer bore the rather cumbersome name of *Anemone Pulsatilla rosea* Mrs. Vanderelst. It is practically identical with

the type so far as habit and silkiness of foliage and flowers are concerned, but the colour of the blossoms is, as already stated, a most pleasing shade of soft rose pink. We understand that it originated as a sport, but will now come almost, if not quite, true from seeds. This new *Anemone* was shown by the Tottenham Nurseries, Limited.

Hyacinth Winter Cheer.—One of the most charming *Hyacinths* that we have ever seen is flowering with us now on a north border. It belongs to the miniature or small-flowered section, and is named *Winter Cheer*. Even in the bud stage it is beautiful, the half-opened spikes being of a lovely terra-cotta hue. When open the colour is glowing rose pink, quite unlike other shades of this colour that we have seen in *Hyacinths*. The Rev. J. Jacob, who kindly brought this variety to our notice at planting-time last year, speaks very highly of it for growing in pots. These miniature *Hyacinths*, of which there are a number, are much more graceful and pleasing than those with larger spikes, such as are generally used for bedding.

Anemone apennina in Grass.—Lovers of spring flowers who are taking note at this season of the plants they will provide for next year should endeavour to see masses of the lovely *Apennine Windflower* in the grass. Kew presents many superb studies of such kinds of planting, not only with *Anemones*, but with other subjects, and there are some other places in the United Kingdom where the *Apennine Anemone* is cultivated in myriads in the grass. The fact that it will thrive under trees is a high recommendation, and we know an orchard which is a sea of blue underneath the fruit trees in spring, and where this wonderful effect is supplied by *Anemone apennina* from year to year, ever increasing in extent and in beauty.

A Pretty Spring Effect.—An effective group may be made by combining *Magnolia stellata* and *Muscari conicum* in a mass or bed near the outskirts of a lawn, for the glistening white flowers of the *Magnolia* appear simultaneously with the rich blue flowers of the *Muscari*, the whole effect being aided by the green setting of the surrounding grass. *Magnolia stellata* is a Japanese shrub which has long been in cultivation, though it is only within the last twenty years that it has become really well known. It is customary to think of it as a bush 4 feet or 5 feet high and as far through, although it grows much larger when planted under very favourable conditions; in fact, a bush growing in the gardens at Abbotsbury Castle, Dorsetshire, was noted a few years ago to be nearly twelve feet high, with a somewhat similar diameter. Few shrubs blossom more freely, but, unfortunately, when planted in exposed positions the flowers are injured by a night's frost during late March or early April.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Two Pretty Rockery Plants.—*Soldanella alpina* is a dainty little plant which likes moist surroundings, but not stagnation. Its flowers are like small fairy bells, and are of a purple hue and exquisitely fringed. The flowers of the somewhat rare *Schizocodon soldanelloides* resemble the above. A plant is a tuft of shiny leaves and of creeping habit. It must have a moist position.—C. T.

Crocus vernus Leedsii.—This bright little Crocus is at present giving its fine, though not large, flowers in plenty. It is of a deep blue, with a white edge, and looks most attractive, though in point of size it is inferior to the better-known Dutch variety, *Ne Plus Ultra*, which is after the same colouring, but is much more refined and attractive. It is one of the prettiest of the small-flowered varieties of *C. vernus*, such as *Petro Polowsky*, *leucorhynchus* and *George Maw*.—S. A.

Saxifraga burseriana major.—I look upon this variety as one of the gems of its race, invaluable and certainly unsurpassed at this early season of the year. I do not say that it is the largest flowered of the *burseriana* forms; probably both *magna* and *Gloria* exceed it in size alone, though these cannot surpass or even equal it in its lustrous crystallised whiteness. Its obscurely-crimped flowers have slightly-waved margins, the result being, in conjunction with greyish, glaucous tufts of spiny leaves, a plant of sterling worth 2 inches in height that dares to face the vicissitudes of the Februaries we know so well. Its beauty, however, demands for it a covering at that time.—E. H. J.

A Pleasing Combination.—On page 130, March 9 issue, the Editor invites readers to note any pleasing plant combinations that have come under their notice. Some of the most pleasing are often the result of an accident, rather than the part of a studied scheme. An instance of this occurred in my garden last summer in the shape of a pretty little picture which was admired by everyone. It arose in this way: A large clump of *Chrysanthemum Mrs. Lowthian Bell* flowered for a long time most profusely. Close by a seedling *Petunia* cropped up, a poor, small-flowered thing of a loose, sprawling habit of growth, but with bright rose pink blossoms of a very pretty shade. The branches of the *Petunia* straggled through the *Chrysanthemum* in all directions, and the combination of the two formed a pleasing and totally unstudied effect. What is more, its beauty extended over a lengthened period.—P. H.

Fruit Prospects in Hampshire.—It is not often that good crops of Apples and Pears are obtained two years consecutively, and as we had very fine crops, especially of Apples, last year, one did not look for a similarly good harvest in 1912. Judging, however, from the show of blossom, the prospects are good. Pears are forward. Apple blossom is, in many cases, well surrounded by young, unfolding leaves, and I have noticed that where this is the prevailing feature, the fruits generally set freely. Where there are large clusters of blooms and few leaves, and those rather stunted, the "set" is a poor one. This does not always happen, but very often. Plums, Cherries, Apricots, Peaches and Nectarines on open walls, and bush fruits also, give good promise. As the weather is so very changeable, we may experience late frosts, and, if so,

every effort should be made to keep the flowers and young fruits dry and protected where possible.—B.

Single-Flowered Camellias.—There has of late been a decided revival in the case of the *Camellia*, but largely owing, I should say, to the increased attention given to the single or semi-double flowered forms. Some delightful and representative groups have been during the present season contributed to the meetings of the Royal Horticultural Society by Messrs. William Paul and Sons of Waltham Cross. From the remarks of the numerous visitors it is easy to see that the single-flowered forms are far more admired than the double ones. This is not to be wondered at, as these single flowers are exceedingly beautiful, their ornamental qualities being in many instances enhanced by the conspicuous yellow stamens. Of the several varieties shown at different times, the following are particularly striking: *Alba simplex*, pure white; *Apollo*, red; *Juno*, white, sometimes flaked pink; *Jupiter*, rosy red, very large; *Mercury*, rich crimson, equal in size to the preceding; *Lady M'Kinnon*, crimson, marbled white; *Minerva*, rose; *Snowflake*, pure white; and *Waltham Glory*, deep red, very fine.—H. P.

Bitter-Pit in Apples.—Mr. McAlpine, page 119, March 9 issue, raises an interesting point in his note concerning Bitter-Pit in Australia and his suggestion that rain and heat are both factors in producing the troublesome disease known as bitter-pit. We are so used to alternating sunshine and showers in England that every year brings such weather during the ripening period, and yet rarely is the trouble so prevalent as during the past season in the South of England. It is probably always found to a small extent in very soft-fleshed Apples, but is rarely seen in Scotland and the North of England, and last season was rare in that district, though not altogether absent, while the rainfall was heavier and the heat less intense than in the South, where even hard-fleshed fruit showed the trouble to a marked extent. As the critical period is mainly in August and September, a comparison of the temperature and rainfall in those months over the past four years in a garden where the trouble was somewhat marked this year for the first time (on a light and porous soil) may be of interest to Mr. McAlpine:

		1908		1909	
		Aug.	Sep.	Aug.	Sep.
Mean temperature (degrees)	..	59.9	56.0	61.5	54.5
Highest in screen	..	81.2	77.2	86.0	70.0
Lowest in screen	..	41.0	36.3	44.0	37.0
Mean soil tem., 1 ft.	..	61.8	56.2	62.3	56.6
" " 2 "	..	62.5	57.6	62.8	58.1
" " 4 "	..	60.7	57.4	59.7	57.6
Rainfall (inches)	..	3.18	1.29	2.16	3.42
No. of days of rain	..	14	13	13	20
Total rain, May to September	..	9.78in.		13.64in.	
		1910		1911	
		Aug.	Sep.	Aug.	Sep.
Mean temperature (degrees)	..	61.3	55.7	67.1	59.1
Highest in screen	..	76.2	74.4	96.2	91.0
Lowest in screen	..	47.3	54.4	43.2	35.4
Mean soil tem., 1 ft.	..	61.5	57.1	67.7	60.3
" " 2 "	..	60.9	57.3	66.6	61.3
" " 4 "	..	59.5	57.7	64.2	61.6
Rainfall (inches)	..	2.16	0.60	0.62	1.01
No. of days of rain	..	15	4	6	9
Total rain, May to September	..	8.9in.		5.73in.	

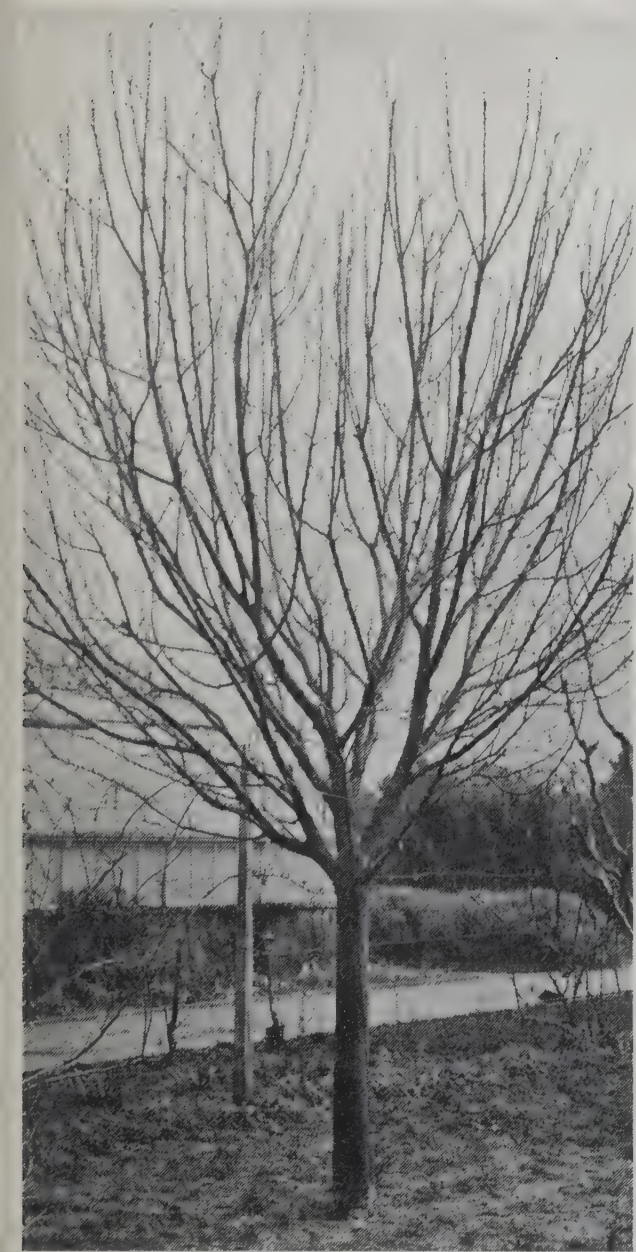
The precise cause of the trouble is still a matter of conjecture—whether heat, heat and drought, or alternations of sun and shower—and only direct experiment can hope to solve the problem.—SCIENTIST.

Calceolaria Burbidgei.—This useful and pretty winter and autumn flowering *Calceolaria*, which is a hybrid between *C. fuchsifolia* and *C. Pavonii*, has proved a boon to the many who require to

keep their conservatories gay in winter. It blooms for months at a stretch, and I saw some nice plants in an old Scottish garden the other day. They were very well grown, healthy and vigorous, and late in the season though it was, had a number of flowers upon them. Cuttings are generally struck at this season for flowering next winter, as was indicated by Mr. R. P. Brotherston in *THE GARDEN* for March 2.—A. M. D.

Hop Manure.—"A. D." in your issue of March 2, page 103, asks a few pertinent questions with regard to the above. His first query is, "What is the experience of amateurs who may have used it?" I have, I think, used it regularly for the last four or five years. I remember I bought it in the first instance to use as a mulch, with the hope that it would enable me to keep the soil of my Rose-beds as moist as possible under somewhat adverse conditions of exposure to wind and sun. I found it answered admirably, and when the sun had taken the moisture out of it, it mixed readily with the soil and did not in any way prevent the free use of the hoe (the secret of all successful gardening), as manure with much straw in it does. It has the additional advantages (1) that it is not unsightly, (2) has no unpleasant smell, and (3) is easily and cleanly applied. It has some manurial value. What the actual percentage may be I do not know, but it undoubtedly has a marked beneficial effect on all plants on which I have used it. Personally, to the great body of amateurs I think I should find it difficult to recommend another manure with greater confidence. With it they run no risk of overfeeding their plants, and, as far as I can judge, it fairly fulfils all that Messrs. Wakeley claim for it. The answer to "A. D.'s" other questions is in the affirmative.—H. E. MOLYNEUX.

Summer - Bedding Flower - Schemes.—When plants that are somewhat fugitive in their flowering are employed for this purpose, it is needful that there should be in the nursery garden some others, either of the same or diverse blend, to put out for quick succession. Mr. C. Turner's arrangement of pink Sweet Williams as a base, with Canterbury Bells growing out of them, mentioned on page 130 of March 16 issue, has the weakness that neither are of long endurance. Few plants give us bloom over so long a period as *Violas*, and as these are of many colours it is quite easy to find in Snapdragons, Pentstemons, Larkspurs or branching Stocks top plants which can harmonise with the carpet hue. Of hardy annuals, very pretty effects may be got from a carpet of blue *Nemophila* or of the deeper blue *Phacelia*, with, for top plants, branching pale blue Larkspurs; or a carpet of *Bartonia aurea*, with annual *Coreopsis*; or a base of a dwarf double rose *Clarkia*, with the deep rich red *Firefly* standing out of it; or of *Nigella Miss Jekyll*, with dark tall Larkspurs. Among those a very enduring arrangement would be one of dwarf white *Antirrhinum* for the base, associated with tall varieties of rich rose or carmine. All the same, in bedding with plants of this nature, to secure colour arrangements it is important that there should always be coming on plants of *Asters*, *Stocks*, *Phlox Drummondii*, Snapdragons, Pentstemons, Pansies and, indeed, anything which would bloom well into the autumn, and thus maintain a long succession of flowers. It would be interesting to get from readers their judgments as to what two plants combined in a bed would give the longest enduring show of bloom that should be harmonious as well as enduring.—A. D.



1.—FRUIT TREE GROWING IN CULTIVATED SOIL.

Rhododendron præcox.—The delightful *Rhododendron præcox* is apparently enjoying the mild spring we have been experiencing, and rarely have I seen it so full of flower or escaping so well from the late frosts, which, in some seasons, reduce the beautiful peach-coloured flowers to wrecks in one night when the shrubs are unprotected from the frost should danger be apprehended. We have no early shrub which appears to gain such universal admiration as *Rhododendron præcox* in late February or early March, and everyone who visits a garden where it flowers well is delighted with the plant. Its leafless branches only seem to set off the better the quantity of flowers it gives, and these are of such charming colouring that the term of "peach" applied to it seems too faint to describe the exquisite colouring. It is quite hardy in itself, but it is the flowers alone which suffer from frost, and a little nightly protection is all that is required for the prolonged enjoyment of their beauties.—FRUTICOSA.

Bamboos for House Decoration.—Readers of THE GARDEN who make a point of having Palms, Dracænas and similar plants in their dwelling-houses for decorative purposes would do well to note carefully the reference made to the above-named plants, Bamboos, on page 117 of the issue for March 9. Living in a district where much hall and room decoration is carried out, both at private and public functions, I can testify to the great usefulness of Bamboos in conjunction with Palms and other plants. I would like to give one word of warning about their treatment. In

many instances the plants are allowed to suffer from want of water at the roots, with the result that the tips of the leaves turn brown and become an eyesore. The plants certainly look better in ornamental tubs than in boxes, but it is not a wise plan to actually grow the plants in the tubs. They should be grown in pots, and the latter placed inside the tubs after they are prepared for the dwelling-house, corridor or hall.—B.

Saxifraga burseriana Gloria.—This was at once the idol and the pride of all alpine enthusiasts as seen in Mr. Clarence Elliott's group at the Royal Horticultural Society's meeting on the 5th inst., the two or three dozen plants, loaded as they were with flowers of the size of a shilling, being a revelation to all. When Mr. Farrer originally exhibited this notable variety, everybody was struck with the large flowers then shown, though no one, I imagine, was prepared to see the great improvement—the marked increase of size—as revealed on the occasion referred to. I look upon *Gloria* as by far the largest-flowered of the *burseriana* group, and a plant difficult to beat for freedom, just as I look upon the best type of *S. b. major* as the most chaste, glistening and pure of them all. *Gloria* might win by size alone, perhaps, though it could never displace the glistening purity of *major*, a fragrant kind and an aristocrat to boot. *Gloria*, however, is a great flower, and where size tells, as it does invariably, no lover of alpines, to use a catch phrase, "will be happy till he's got it." Mr. Elliott is to be congratulated on a great cultural success.—E. H. JENKINS.

Apple Trees in Grassland.—The differences shown in the accompanying illustrations of the growth between trees planted in grass and arable land respectively are very striking. Fig. 1 represents one of a number of trees planted in tilled land and grown therein from the beginning, Potatoes and various other crops having been grown beneath their branches for ten years in succession. Fig. 2 is from a plot planted at the same time, in the autumn, as Fig. 1. The soil in which the trees were planted was sown with grass the following spring, the result being that they grew but little and began to show unmistakable signs of partial starvation. We cleared a circle around the stems and manured it, but this made very little difference to the health of the trees. Eventually, after the grass had grown for six years, we dug it up, well manured the soil and planted it with Cabbages. Last year a crop of Mangolds was harvested from this plot. The result from the treatment was satisfactory, and I am glad to see a very marked improvement in the trees generally. It is a great mistake to grass down young Apple trees, and especially in poor, sandy soil. There are plenty of instances such as ours in various places. Keep the trees clean for a number of years, and then grass them down if thought desirable.—W. D. POPE, *The Lodge, King Barrow, Wareham*. [Experiments conducted at the Duke of Bedford's Fruit Farm at Woburn have proved that trees of practically all kinds thrive much better in cultivated soil than in grassland.—ED.]

FORTHCOMING EVENTS.

April 2.—Royal Horticultural Society's Meeting and Exhibition. Lecture at 3 p.m. by Mr. R. Irwin Lynch on "Tender Plants for a Warm Corner." Scottish Horticultural Association Meeting.
April 4.—Manchester Orchid Society's Meeting.
April 6.—Société Française d'Horticulture de Londres Meeting.

THE ROSE GARDEN.

ROSES FOR CUT BLOOMS.

Baskets of Roses.—The excellent idea started by the President of the National Rose Society of offering a prize for Roses shown in baskets has undoubtedly "caught on," and we are likely to see these pretty exhibits in greater force this coming season. This style of exhibiting is particularly helpful to all who wish to gain knowledge as to the more suitable varieties for home decoration, and it also portrays at a glance what may be accomplished by employing the various sorts for bedding and massing, because one may see the Roses practically as cut from the plant without the artificial aid of wires, which becomes necessary when such Roses are exhibited in bunches.

A Warning Note.—The time is now drawing near when we shall see many varieties exhibited at the spring shows, varieties that undoubtedly are good for growing under glass; but one must be careful to see them growing outdoors before being led to plant for garden decoration. So many Roses will make grand long stems under artificial conditions, while under natural conditions they would be a comparative failure.

For House Decoration we want Roses of good staying power, decided colour, and also fragrance. It is because they possess these good qualities



2.—FRUIT TREE PLANTED AT THE SAME TIME AS FIG. 1, BUT GROWN IN GRASSLAND.

that Mme. Abel Chatenay, Liberty, Richmond, La France and Killarney, are welcomed, and they should be grown in quantity for this purpose. So also should Lyon Rose, but it is of such a unique colour that it must be very carefully placed, or its beauty is not made the most of. Very effective combinations were achieved last season with Lyon Rose and Irish Elegance, and this blending would be difficult to surpass.

If Messrs. A. Dickson and Sons are sending out the rival, and perhaps improved, Irish Elegance which they have named Firebrand, and another gem, Queen Mary, then decorators will welcome these most gratefully. Firebrand is really a richer coppery colour than Irish Elegance.

There is a very charming Rose, Gottfried Keller, that must sooner or later be largely grown for decorative work. It is a real gem and a very continuous bloomer, a sort of glorified Lady

orange buds of Canarienvogel will be in much request for blending, perhaps with Irish Elegance.

I should like to see prizes offered by the National Rose Society or the Royal Horticultural Society for tables of Polyantha Roses. I am convinced they are not grown nearly so much as their merits deserve, and they are likely to be greatly improved. A golden Orleans Rose with trusses as huge as this fine novelty would be a real gain. P.

SEASONABLE WORK AMONG THE ROSES.

THERE is considerable work to be done in the Rose garden at present besides the most important task of pruning. In the first place, it is by no means too late to plant, but the work should be done as expeditiously as possible when the plants are received from the nursery. I would prefer to prune late-planted Roses quite

in this connection, rather than the neat structure too often found, which so quickly come to grief.

Much more thinning might be practised with advantage upon pergolas, arches and arbour than is generally done. Any blanks among climbers can be filled with plants from pots, which will afford a display the same season if turned out of the pots and planted with care.

Roses Under Glass.—This is also a very busy time with our Roses under glass, as they should now be in full growth, if not already in bloom. The application of liquid manures is important, but many err through using these much too strong, often to the extent of crippling the young roots, and thus doing more harm than good. I have found a mixture of animal manures and soot, placed in a tub or tank of water, produce an excellent liquid stimulant for Roses. We cannot all procure the drainings from a yard or even a cow-stall, and if the soot

be placed in an old sack or bag, the objectionable scum is avoided. No doubt the ammonia arising from the animal manures is of benefit to the Rose foliage, but in some cases one has to avoid this. In such an instance guano water, at the rate of 2oz. to the gallon, may be used with advantage. But what is even cheaper, and almost as good, may be made from soot, using the water (unstirred) a little darker in colour than sherry. Where only a few plants are grown, the soot may be put into an old stocking and hung so as to rest in the tub of water.

Mildew and insects must be warred against directly they put in an appearance. In fact, one cannot well take too prompt measures as regards fighting these foes. The different methods of eradicating these have frequently been explained in these columns. A. P.

ROCK AND WATER GARDEN.

HARDY CYCLAMEN AND THEIR CULTIVATION.

ALTHOUGH the various species of Cyclamen add such a charm to our gardens, even in the dullest part of the year, they do not seem to be grown to

the extent their beauty justifies. Indeed, it is surprising what a number of amateur gardeners one meets who are astonished to learn that there are a large number of these pretty little plants which are quite hardy.

By careful selection one can have these hardy Cyclamen in flower during a number of months in the year, as some species are spring flowering others late summer, and, yet again, some come into blossom during September and October. As a whole, the plants require one or two years in any given spot to make themselves at home, and it is usually not until after this interval that they flower really profusely. Perhaps this factor may account for their not being appreciated by many gardeners.

The position they require is a thoroughly well drained one, and preferably in shade or half shade. They thrive amazingly at the base of large trees—often a position which is somewhat difficult to



A BEAUTIFUL HARDY CYCLAMEN: C. COUM ALBUM.

Penzance, with a few more petals than that charming variety. Although of such a peculiar growth, I am convinced that Château de Clos Vougeot will soon be largely grown outdoors for decorative work. It is a wonderful colour, almost black, a colour that attracts everyone, and its fragrance is delicious. Mrs. Alfred Tate is the embodiment of elegance and beauty of bud, an ideal variety for table decoration. Of the newer Rambler Roses, one of the most beautiful, from a decorator's point of view, is Ethel, a variety of the wichuraiana class, raised by Mr. C. Turner. It is to be hoped he is sending this out this season. For novelty of colouring I am not sure but that the so-called Blue Rose will not find many admirers. It would need careful blending, perhaps with foliage of Rosa rubrifolia, but I should say a table of this would find many admirers. Certainly Jessie will become an established favourite, both as a pot plant and for cutting; and the pretty little golden and

hard at the time of putting them in, certainly much harder than if the same Roses had been planted during the late autumn months. Cut back to quite sound wood, although I have found very few frost-affected growths so far. Plant firmly, and in the case of standards see that they are securely staked at once.

After pruning, the ground may be cleaned and slightly loosened before applying a mulch of well-rotted farmyard manure. It is from now onwards that the juices from this will be of most service to the Rose roots, and not when they are in a dormant condition.

Pergolas and arches should be strengthened if at all unsound. We do not want the annoyance of these collapsing just when the Roses are in full growth and beauty. It does not matter if coarse, rough pieces of wood are used to strengthen these. They will soon be hidden, and, indeed, I have a decided leaning to solid and rough-looking work

garnish—the half-dry soil about the boles of such trees seeming to suit them well. In the rock garden they seem to prefer somewhat secluded spots protected from violent winds, where the soil can be made up of good loam, leaf-mould and old mortar in about equal proportions, and added to this mixture an equal proportion of broken brick or stone chips. Such a compost is decidedly “open,” and I find in my district, which is notorious for its heavy clayey soil, that this medium is appreciated by them. It is by no means uncommon, especially with *C. neapolitanum* (often sold under the name of *C. hederæfolium*), for the freshly-planted tubers to throw no leaves for twelve months. This is disheartening to the novice, but the plants should not be despaired of, as they mostly come away in the orthodox fashion after this rest.

My experience suggests that a *Cyclamen* which is doing well should on no account be interfered with. A suitable position for them can be found in the alpine garden under dwarf shrubs, such a position suiting them admirably, and in a way utilising what would otherwise be waste space. Usually the first to delight us with its cheery blossoms, early in the New Year, is *C. Coum* and its variety *alba*. The former has flowers of a rich reddish purple, very intense at the mouth, while the latter is tinted with the most delicate flush of pink, and at its mouth a rich touch of the reddish purple, as in the type. The leaves are a rich bronzy green on the surface, the under sides being red. The illustration on page 156, gives some idea of this white variety; and although the plant shown is in its first season after planting, it has a fair number of flowers, though nothing to what I am anticipating in a year or two. Other species which are of equal value are *C. repandum*, flowering about April or May, pink to red in colour; *C. europæum*, flowering from July onwards, of a reddish purple tint; *C. neapolitanum*, also reddish, and its pure white form, *album*, a lovely plant, both flowering in September and October, and afterwards displaying somewhat Ivy-like leaves of a rich green, marbled with silver.

Woodford, Essex. REGINALD A. MALBY.

THE GREENHOUSE.

LILIES FOR GREENHOUSE AND GARDEN.

(Continued from page 147.)

Potting the Plants.—There are two methods of potting Lily bulbs in vogue, one of which consists of filling the pots to one-third of their depth with soil and placing a little soil around the bulb, or even none at all, and leaving it till signs of growth ensue. This, to my mind, is irrational and wrong, but many find it answers well. I prefer to cover the bulbs at the outset. By so doing the bulb will not be harmed by exposure, while growth will be stimulated into an earlier activity, and, the stem-roots penetrating the soil at once, will just as quickly benefit the plant. The best of the *auratum* set are the type and its varieties *platyphyllum* and *rubro-vittatum*. Pots of 6 inches to 8 inches diameter should be used.

Lilium speciosum and Its Varieties.—All the varieties of this group are great stem-rooters, though they differ in their larger size, more vigorous growth, and more voracious appetite. Hence their chief requirements would be larger pots and richer soils. For example, one big bulb would be sufficient for a pot of 8 inches diameter, though

three smaller bulbs might easily be accommodated in the same-sized pot. Where finer examples are desired, one cannot too strongly urge the value of these when grown in tubs or even large pots. In this way they are admirable for the greenhouse or covered verandah near the entrance, and, affording a profusion of flowers for some weeks, become a source of pleasure and pride to their owner. Moreover, they are only delicately or obscurely fragrant, hence are suited to decorative work in the sitting-room. The best varieties of this group are the white *Kratzeri* (a flower of spotless purity) and the crimson-flowered *rubrum*, *cruentum*, *magnificum* and *Melpomene*. These varieties, too, do exceedingly well in the garden, where they afford a successional flowering to those grown in the greenhouse.

L. longiflorum.—

There are many varieties of the white trumpet Lily, than which none is more chaste or desirable. Their fragrance, purity, and the ease with which they may be grown are among other good attributes. Moreover, they are dwarf-growing and cheap, hence of a greater value. Three moderately large bulbs can be accommodated in a pot of 6 inches diameter, and as each bulb will produce from two to four flowers, a good display is possible. None of the varieties of this group is difficult to grow, though under glass they are susceptible to green fly attacks, to prevent which the usual remedies should be employed. The best varieties are *longiflorum giganteum*, *l. eximium* and *l. Sakesima grandiflorum*, each in its way superb. The above-named sets are the best for pot culture. After potting, place them under the greenhouse stage or in a frame, and, provided the soil is moderately moist at the time, no water will be required for ten days or so.

For the Open Garden there are many good and suitable kinds that may be planted at the present time quite well. Prior to the planting, the ground should have been well and deeply cultivated and given the addition of leaf-soil, well-decomposed manure that is not of the “fat” order, and, if the soil be heavy or retentive, a further addition of sharp sand or grit. The bulbs should be buried about five inches deep. Those

of the *speciosum* group might be planted 7 inches deep or even more, provided always that a generous depth of soil remains below that level.

L. testaceum, or the Nankeen Lily, is certainly one of the best for spring planting, and one of the most effective when in flower. In good health it is a handsome sort, and attains to 6 feet high when established, a more usual height from spring plantings being 4 feet. It prefers a rather cool rooting medium and soil of firm texture.

L. tigrinum and its varieties are among the hardest, showiest and cheapest. Need one say more to commend them to all lovers of the race?



PRIMULA MALACOIDES, A BEAUTIFUL AND GRACEFUL GREENHOUSE PLANT. (See page 158.)

So cheap are they by the dozen or hundred that they may be freely planted in beds, in border groups, in the shrubbery, or in woodland spots—anywhere, indeed, where effective gardening is desired at a minimum cost. The typical kind above-named and its varieties *splendens* and *giganteum* are all worthy of attention.

L. croceum (the Orange Lily) and the forms of *umbellatum* are at once the sturdiest and hardest of this noble tribe. They are of a bushy nature, vigorous, erect-flowered and showy in red, crimson and allied shades. Moreover, they are quite

content with common garden soils and a little manure. In concluding an all too brief note on Lilies, one cannot forego the mention of *L. pardalinum* (the Panther Lily), which is so admirably suited to spongy or wet ground where a liberal depth of peat, leaf-mould and loam exists for its delectation and support. E. H. JENKINS.

A RARE GREENHOUSE LILY.

(*LILIUM ROSEUM*.)

THIS rare Himalayan Lily is one of the most interesting plants of the genus. *Lilium roseum* and *L. Hookeri* (an allied species) in structure come midway between the genus *Fritillaria* and that of the *Lilium*; in fact, some botanists class both plants as *Fritillarias* under the names of *F. Hookeri* and *F. macrophylla* (roseum).

L. roseum was first collected by Thomson and Strachey, the last-named sending home seeds, which first flowered at Kew in 1853. The tallest spike on the plant illustrated is about one and a-half feet high, carrying twenty-four flowers. The leaves, closely arranged at the base of the stem, are 1 foot to 1½ feet long, and less than an inch in width. Higher up the stem the leaves are shorter and further apart, gradually merging into bracts near the flowers. The bell-shaped blossoms are a pleasing pale mauve tint, 1 inch to 1½ inches in length, and 1 inch broad at the mouth.

This Lily cannot be regarded as perfectly hardy, for, when grown outside, the protection of a warm south wall or sheltered nook in the rockery is necessary. A well-drained, light, sandy soil is the most suitable. It can be grown very successfully in a cold greenhouse or alpine house. The plant illustrated is growing in a pot. In Continental catalogues the subject of this note is more often listed as *Lilium* or *Fritillaria thomsonianum*, the name which is given in the *Botanical Magazine*, t. 4725. No mention of this Lily is made in the two popular books on Lilies, "The Book of the Lily," by W. Goldring, or "Lilies," by A. Grove, one of the series of "Present-Day Gardening." A. O.

PRIMULA MALACOIDES.

It is surprising to note how rapidly this graceful *Primula* has leapt into public favour. Although of recent introduction, it already finds a congenial home in amateurs' greenhouses in all parts of the country, and market-growers—the best judges of the public taste—are growing this delightful *Primula* in quantity as pot plants. Of light habit, free and easy of growth, it is invaluable for greenhouse decoration during the winter months. The flowers, of a pretty pale mauve, are produced tier upon tier to a height of about two feet. There is a pure white variety now in commerce known as *P. malacoides alba*. It is identical with the type except in colour.

COLOURED PLATE.

PLATE 1448.

STAR-FLOWERED CINERARIAS.

THE term "Star-flowered" is used to designate a very beautiful section of these valuable greenhouse plants, which differ markedly from the old-fashioned type with their sturdy growth and massive flowers. Although the Star Cinerarias are of garden origin, their distinctive title is often erroneously Latinised into

they occupy a position undreamt of a couple of decades ago.

Messrs. Sutton and Sons of Reading have devoted a good deal of attention to the cultivation of the Star Cinerarias, with the result that they have improved out of all knowledge, till the term "Sutton strain" has become a password for the very best. This can be readily understood by those who attend the meetings of the Royal Horticultural Society and the principal exhibitions during the season. Indeed, Sutton's Cinerarias at the Temple Show are always a centre of admiration, the plants showing high cultural skill as well as a great variety of pleasing colours. The coloured plate presented with this issue represents a typical plant in Messrs. Sutton's collection.

It is especially in the colour of the flowers that the Star Cineraria of the present day show such an advance on their predecessors, for in the older kinds flowers more or less of a magenta tint were very numerous among them; but now this objectionable colour has been to a great extent eliminated, its place being taken by white and delicate shades of blue and pink. Such great pains are taken in the selection of the seed that this section is now offered true to colour in white, light blue and yellow, as well as in mixture.

Besides this there is a strain in which the florets are rolled lengthwise, thus making them much narrower than would otherwise be the case. These are known as Cactus-flowered Star Cinerarias. The ordinary florists' varieties have also a section with blooms formed in the same way.

A comparatively new group of Cinerarias has been shown by Messrs. Sutton within the last two or three years under the name of Reading Gem. This section originated by the intercrossing of the Star Cineraria with the pretty loose-growing Cineraria Heritieri from Teneriffe. In Reading Gem the plants grow about a couple of feet high, and form large, loose heads of starry flowers of different shades. The foliage is small, and on the under side is intensely silver. Messrs. Sutton offer seed of Reading Gem; but in the case of some of the Heritieri crosses it is necessary to increase them by means of cuttings.

Raising Seedlings.—It is very essential that seed when purchased should be obtained from a

reliable source, otherwise one may find a preponderance of the magenta shades, to which everyone nowadays most decidedly objects. As seeds of the best forms are valuable, their sowing should be carefully carried out and the after-treatment of a par therewith. The seeds should be sown in May and June in shallow boxes or pans. The receptacles must be clean, well drained, and filled to within an inch of the rim with a compost made up of equal parts of loam and leaf-mould, with a liberal mixture of silver sand. Before using



LILIUM ROSEUM, A RARE GREENHOUSE SPECIES FROM THE HIMALAYA.

that of Cineraria stellata. Time was when all those plants that did not conform to a rigid standard set up by a few florists were discarded, and the selection of varieties proceeded on very even lines. After a while, however, the public taste set in towards decorative plants, of a lighter character and less formal in shape than those previously grown. As they quickly became popular, many raisers worked away on their own particular lines, and the members of this section were freely exhibited, so that they became everyone's flower, and to-day

this should be broken down finely. Then pass a portion of this prepared compost through a sieve with a quarter of an inch mesh, pressing it down moderately firm and making it quite level. On this sow the seeds, taking care that they are not overcrowded, as, if they are allowed sufficient space, the young plants will not need to be pricked off, but may be taken directly from the seed-pans and potted into small pots. When the seeds are sown, they must be lightly covered with some very fine soil, say, such as will pass through a sieve with an eighth of an inch mesh. Care must be taken not to bury the seeds too deeply, while it is also of equal importance to see that the watering is done by means of a very fine rose. In a gentle heat the seeds will soon germinate, and the young plants make rapid headway. They must soon have plenty of air, and a good place for them during the summer will be in a frame under a north wall or in some similar position. A very important matter is to see that the plants are not allowed to get stunted and pot-bound before they are shifted into larger pots, as if this happens it is a difficult matter to induce them to grow freely afterwards. When growing they are greatly benefited by being bedewed with the syringe night and morning. Watering in all stages must be carefully done. Aphides may be kept in check by means of vaporising, and the little maggot which makes tunnels in the leaves should be killed by a nip directly the first traces are to be seen. If Auto Shreds are used for fumigating they will kill both aphides and leaf-mining maggot. Want of space has compelled me to limit my cultural remarks to a brief mention of two or three of the more important features, but if these are fully observed the cultivation of these beautiful greenhouse plants ought not to present any serious difficulties. H. P.

TREES AND SHRUBS.

THE HARDY BROOMS.

IT would be difficult indeed to find a more beautiful sight in early spring than a railway cutting the banks of which are clothed with golden masses of the common Broom (*Cytisus scoparius*), a plant that can fairly claim to be one of the most brilliant and hardy of all our natives. On commons and waste places generally where the soil is poor, this shrub will also be found, clusters of plants forming perfect sheaves of gold. Beautiful as this Broom is, there are, happily, many others of even more refined beauty available for growing in our gardens

and woodland. To those whose soil is of a poor, sandy character, these shrubs are indispensable, for it is in such soil that they luxuriate and give their blossoms in abundance; indeed, the Brooms will grow well where very little else in the way of shrubs can be induced to exist, and for this reason should be largely planted where the soil conditions are as described above.

Again, we find the various members of the family differing considerably not only in the colour of their flowers, but also in dimension and the forms they assume; hence one may fairly claim that there are kinds suitable for gardens of all sizes and for almost every position in the garden. The small, procumbent varieties are excellent for the rock garden, and even the larger types may be utilised there when a bold mass is desired.

these in pots, as there is then very little risk of loss. Planting may be done in late autumn or in early March, or April if from pots.

Among the taller-growing kinds, mention must be made of two varieties of our native Broom, viz., *Cytisus scoparius andreanus* and *C. s. sulphureus* the Moonlight Broom. The first has the same habit as the native plant, but instead of the blossoms being pure yellow, the wing petals are blotched with brownish crimson, this giving them a touch of beauty not easily described. *Sulphureus* has a slightly pendent habit, its large blossoms being pale sulphur colour. *Cytisus præcox*, which is about the earliest to bloom, has already been referred to. One of the most graceful is the white Spanish Broom, *Cytisus albus*. This forms a large bush 6 feet or more high, and is one that



A BANK OF CYTISUS PRÆCOX, ONE OF THE EARLY HARDY BROOMS.

It is essential in planting to form large or moderately large masses of one kind; solitary plants, in most instances, lose much of their beauty. At Kew and other places the system of planting large beds formed in the grass in the open parts of the woodland is successfully adopted. The illustration above shows one of the most beautiful of all the Brooms, *Cytisus præcox*, utilised for a unique purpose. At the back of the plants is a tall Yew hedge, in front of which is a bank in which the Broom is planted, its pendent stems, clothed with myriads of creamy white flowers, providing a feast of quiet, graceful beauty that would be worth going far to see.

To those about to plant these shrubs, however, it will be necessary to give a word of warning. Owing to the fact that they make very few roots, and these of a long, wire-like character, they transplant badly and only very young plants should be used. If possible, it is better to purchase

may be planted as an isolated specimen. *Cytisus biflorus* produces its rather small yellow flowers in pairs and grows about four feet high. It is not so showy as some, but is, notwithstanding, a very useful plant. A new hybrid of rare beauty is named *C. Dallimorei*, and is said to be the first artificially-raised hybrid known, its parents being *C. albus* and *C. scoparius andreanus*. In size the blossoms are midway between those of its parents, the colour being creamy white and rosy crimson.

The following varieties, owing to their dwarf and, in some instances, prostrate habits, are especially adapted for the rock garden or other positions where low-growing shrubs are required; *Cytisus kewensis*, creamy white; *C. Beanii*, golden yellow; *C. decumbens*, rich yellow, very dwarf; *C. leucanthus*, a rare plant of dwarf stature and clothed with creamy white blossoms; *C. purpureus*, rosy purple; and *C. versicolor*, similar to the preceding plant, except that the flowers are paler in colour. H.

THE FLOWER GARDEN.

SWEET PEA NOTES.

Autumn-Sown Plants.—There is a remarkable difference between the plants from seeds sown outdoors in the autumn in various gardens. I have seen hundreds in splendid condition, equal numbers that are little better than worthless, and many that are quite dead. This is, of course, due to the varying effects of the weather. On deep, warm soils the losses are scarcely appreciable, while on shallow, cold lands the trouble is irremediable. Progress in the autumn months was generally satisfactory, but the incessant wet of the winter, followed by frosts of exceptional severity in many districts, have played sad havoc, and staunch advocates of outdoor autumn sowing are now sadly discussing whether the system is everything that is good. Personally, I am a whole-hearted believer in it in deep, warm soils that are on the light side, but on strong clays I regard it with a big element of suspicion. Why those who are enthusiastic enough to sow in the autumn at all do not go to the little trouble required to provide adequate frame accommodation I can never understand. Perhaps they will strain a point and do so after their experience of the present season.

Indoor-Raised Plants.—It is now time that all plants raised from seeds sown under glass were put into their flowering quarters. Of course, the bulk of the planting will have been carried out a week or two back; but just as there are some people who cannot resist too early planting, there are others who cannot be induced to do it when the proper time arrives. All the conditions should be as nearly perfect as it is possible to get them, and the earlier the plants can secure an excellent hold of the soil, the better the prospects must be. It will not be long before the ground will be really too warm for a satisfactory start; hence immediate planting is urged upon growers.

Staking.—It is the excellent custom of many cultivators to stake either on one or both sides of the lines at the same time as the planting is done; but it is not always convenient to do this, and it cannot, in any circumstances, be regarded as an imperative necessity. If it could not be accomplished then, let it be put in hand forthwith. All who are able to do so still use the old-fashioned Hazel or other sticks, and there is no disputing that the plants like them, while it is equally certain that they are the most artistic supports that can be used. Notwithstanding the number of times it has been urged that the sticks must never fall inwards at the top, the mistake is still commonly made, with the inevitable result that the best support is not provided just where it is wanted. It is rather more difficult to stick with the tops

running slightly outwards than inwards, but it is infinitely the better system, and therefore should always be adopted. The height of the sticks from the ground will necessarily vary in practically all soils. In some gardens the plants only get up 5 feet or 6 feet, while in others they go up twice or even thrice as tall. In the early stages assistance is much appreciated by the plants. The shoot may not be going in exactly the correct direction, or, if it reaches the stick, it does not take kindly to it. In both instances a loose but secure ligature will put matters in proper order and encourage excellent progress. Where wire supports are used, the experience of many

be allowed between the seeds, while twiggy sticks should go to the youngsters before they attain to a height of 4 inches, as they can then never fall over.
HORACE J. WRIGHT.

PROPAGATING PHLOXES BY CUTTINGS.

THESE showy border flowers, varieties of the species *decussata*, are invaluable in a good herbaceous border, and by successional propagation may be flowered from July until late October, and will provide at the latter date feasts of colour not obtainable from any other plants. To secure strong, healthy stock propagation by cuttings is imperative. Many complaints are heard of diseased stock; the growth becomes curled, the foliage takes on a yellow appearance, and the flowers produced are miserable specimens and not worth the space occupied. The practice of dividing old clumps, often at a season when growth is dormant, is much to blame for this, as it is then impossible to distinguish the healthy from the unhealthy plants. This can be avoided by propagating from cuttings, carefully selecting healthy growths, and a start may now be made.

They root easily in a cold frame in a sandy compost. Care must be exercised in shading from sun for the first fortnight, and when they have commenced to root, gradually give more light and air, the main object being to secure sturdy little plants. Do not allow them to remain too long in the cutting-boxes, and when sufficiently rooted (generally within a month) plant out in a well-prepared position in the border or in well-prepared nursery quarters. Care must be taken to see they are not allowed to suffer from want of moisture at the time of planting.

These plants, after producing one splendid truss of bloom the first season, provide ideal plants for the herbaceous border the following year, and should not be allowed to remain in the border after the second year.

To obtain a succession of blooms a batch of cuttings should be inserted every three weeks until the end of May; these will give flowers until the end of October if not destroyed by severe frost. The great value of this method is that the stock is kept in a healthy, vigorous condition, and the increase in size

of pip and truss obtained from these young plants is an ample return for the labour incurred.

Phloxes require generous treatment to secure the best results, and a mulching of well-decayed manure early in June will carry them through the most severe drought, providing the ground has been deeply cultivated and well manured.

The above method is the one advocated by Mr. James Box of Lindfield, Sussex. Those who had the pleasure of seeing the beautiful exhibit of Phloxes staged by him in the Royal Horticultural Hall in October last year will realise the value of raising plants from cuttings as advised above.



THE NEW EARLY-FLOWERING DAFFODIL HELIOS. (See page 163.)

growers proves that help to start with is essential to success.

Sowing Seeds.—It is by no means too late in the South of England, and just about the best time in the colder districts, to sow seeds out of doors. I would again impress the vast importance of thorough soil preparation, thin seeding in flat-bottomed trenches varying in depth from 1 inch to 3 inches, according to the nature of the ground, and very prompt sticking. Nothing should remain to be done in connection with the working or manuring of the site. As far as seeding is concerned, a distance of 2 inches or 3 inches ought to

GARDENING FOR BEGINNERS.

LAYERING TREES AND SHRUBS.

OF the several methods adopted for increasing the stock of various kinds of trees and shrubs, layering is the most simple, and there are a few people who would fail to carry it out successfully. Moreover, it is the best of all methods for the propagation of many things, and it would be difficult to raise large stocks of some subjects by any other means. So important is this method of propagation that nurserymen usually set aside a section of ground solely for the purpose. This is called the "stool-ground," and the plants on it are reserved solely for layering. A modified system of coppicing is adopted, whenever possible. Thus, in the winter-time, clumps of vigorous shoots springing from old rootstocks are seen.

During March and April a sufficient number of the most suitable shoots are selected for layering, and the remainder cut away. After layering, little other attention save cleaning is necessary until autumn, when the layered branches of many things will be rooted well enough for removal; and another crop of young branches will have been formed for the following year. In some cases, however, the layered branches take more than one year to root well enough to warrant their removal, but in such cases it usually happens that new growth from the stool is not vigorous. A familiar example of a common tree which is raised from layers is the common Lime, while the London Plane, various Maples, Sea Buckthorn, some kinds of Cornus, Lilacs and Philadelphus may be increased in the same way. Layering is often resorted to



I.—A PREPARED BRANCH READY TO BE PEGGED DOWN TO THE SOIL AT THE PLACE WHERE THE TONGUE IS MADE. A TONGUE IS NOT ALWAYS NECESSARY.

when a stock of *Magnolia grandiflora* is required, for although layers take from two to three years to root, it is practically the only means of propagation which is reasonably effective. *Eucryphia pinnatifolia* has been increased by layers, but it cannot be said to be such a good means of propagation as seeds, for branches take a considerable time to root well enough to warrant their removal from the parent plant, and even then they have a habit of dying off suddenly during the first season after removal.

Layering Rhododendrons.—Some nurserymen make a speciality of increasing Rhododendrons and Azaleas by this means, and although it takes a longer time to produce saleable plants than by grafting, those raised from layers have the advantage of being on their own roots; therefore there is no danger of suckers appearing from the base and robbing the scion, which sometimes happens with grafted plants. Although the removal of such suckers is an easy matter in the first instance, it must be remembered that the suckers are not always very distinct from the remainder of the plant, and an inexperienced person might easily let the two grow together unknowingly until the sucker flowered, by which time serious harm may have been done to the plant.

Heaths and Other Shrubs.—Heaths and several Heath-like shrubs are sometimes increased by layers, although that means of increase does not produce such good plants as those raised from cuttings. Yet, where proper propagating convenience is not available, the method may well be resorted to. With the layering of Heaths a different method is adopted than is the case with shrubs with strong branches. In the latter case the branches are pegged down, after being tongued or not (see Fig. 1), as the case may be, into light, sandy soil; but the branches of Heaths are

weighted into the soil by means of stones. This work is accomplished at almost any time during spring and summer, and the stones are left in position for about two years before the young plants are ready for removal. In the case of various kinds of *Rubus*, a different method of layering is adopted than with other shrubs, for the points of the branches are pegged into the ground, and from these swollen buds appear, which eventually form strong young plants. Several dwarf members of the *Prunus* family, such as the double forms of *P. japonica*, *P. triloba* and *P. nana*, which are sometimes found difficult to increase by means of cuttings, respond readily to layering, and branches tongued and put down in the ordinary way in March may be removed as well-rooted plants by the following October. The same may be said of the evergreen kinds of *Ceanothus*, for such species as *rigidus* and *papillosus* are sometimes difficult to root from cuttings, though roots form well from layers. *Wistaria chinensis*, *W. multijuga*, shrubby *Spiræas* (see Fig. 2, and Winter Jasmine (see Fig. 3), may be grown from layers, and, in fact, almost any of the ordinary garden shrubs. There are, however, one or more reasons why layering cannot be adopted for all shrubs, for in the case where suckers are undesirable, other ways of propagation would be more suitable; then, when stock is scarce, layering would be less economical than other methods, for one layer would form several cuttings or grafts. When layers are put down in an ordinary shrubbery, care should be taken to secure them from injury, for careless hoeing might easily spoil a season's work.

D.



2.—AN ESTABLISHED PLANT OF A SHRUBBY SPIRÆA SIX MONTHS AFTER THE PROCESS OF LAYERING.



3.—WINTER JASMINE IS EASILY LAYERED. YOUNG PLANTS SHOULD BE SEVERED FROM THE PARENT STOCK IN OCTOBER.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Shrubberies.

Willows.—For planting beside streams these are highly ornamental, and may be kept cut hard back each season.

Shrubs for Winter Effect.—The value of many of the commonest occupants of our shrubberies when properly treated is becoming more apparent each year. At this season, just as growth is commencing, they should be pruned hard to the ground. To see them to their best advantage, planting is best carried out in irregularly-shaped beds. *Cornus alba* and the variegated-leaved variety, *Salix viminalis* and *S. cardinalis* give brilliantly-coloured stems, while other subjects that may be treated similarly are *Rosa rugosa*, *Spiraea Douglasii*, *Populus alba pyramidalis*, *Leycesteria formosa* and Golden Cut-leaved Elder. After pruning, fork over the beds and make them tidy.

Laurels.—Where these have become unsightly, prune them hard back to the ground, when growth will soon be resumed and much improved. Scraggy bushes, if pruned back, will soon make shapely specimens.

The Kitchen Garden.

Carrots.—The main crop of these may be sown now as soon as the weather permits. To obtain the most satisfactory results, the soil should not have received any manure this last winter. Fork over the ground, add some wood-ashes and soot, and rake down to a fine tilth. Draw shallow drills 1 foot apart; sow evenly and thinly. New Intermediate is an excellent variety.

Exhibition Roots.—Where extra quality roots are required for exhibiting and the soil is not favourable to their growth, bore holes with an iron bar into well-worked soil, 3 feet deep, in rows and fill with some finely-sifted soil. Be sure the hole is filled. Sow a pinch of seed on top of each and subsequently thin to one plant. Parsnips may be treated in the same way, but they require larger and deeper holes.

Peas.—Transplant as they become fit successional supplies raised in boxes in a cool house. Where possible, stake as soon as planted. Sow seed now in the open ground of good Marrowfat varieties. The dwarf varieties are well suited for small gardens.

Tomatoes.—Admit air freely, when possible, to houses or pits containing these, as thereby a strong growth is encouraged and the plants when in flower set more freely. Give no stimulants until the first truss of fruit is formed and swelling. Pot successional plants firmly.

Artichokes (Globe).—Remove any protection now that was afforded the plants. Suckers may now be planted out in well-worked land that has been liberally treated with manure.

Lettuce.—Sow a pinch of seed for further supplies, and continue to plant out from previous sowings.

The Plant-Houses.

Ferns.—The plants will need shade from bright sun. Keep the surroundings moist by frequent dampings of the floors and stages, but no syringing of the foliage. As growth matures, increase the amount of water. Keep a look-out for slugs, which are very fond of the young, tender fronds.

Cannas.—These make fine plants when in flower for decorative purposes, and are easily managed. I like to grow these plants in small pots, say, 5-inch, in preference to those of larger dimensions. Select a portion of the root with one good growth attached and grow in a warm pit. Water sparingly until a good growth is made, and when the pots are filling with roots, liquid manure-water will prove beneficial. In this manner frequent batches may be grown, and there are many beautiful varieties of varied and exquisite colouring.

Herbaceous Calceolarias.—Assist these plants with manure-water. Watch carefully that slugs do not attack the plants. These will soon need transferring from the frame in which they have been growing to the greenhouse.

Fruits Under Glass.

Melons.—The dull weather generally experienced has not been favourable for the early plants

of this fruit. Take every opportunity when the weather permits of admitting a little air to promote a good, sturdy-foliaged plant, closing early in the afternoon. As soon as the female flowers appear, artificial fertilisation must be resorted to by taking the male flowers (removing the petals) and placing them in the centre of the pistillate form.

Early Pot Figs.—Syringe the plants twice daily with tepid water and maintain plenty of humidity in the house by frequent dampings, using strong manure-water for this purpose in the evening. The plants, especially those that were only top-dressed, will need more water.

The Flower Garden.

Dahlias.—Examine the tubers and cut away any portions that show signs of decay, when the plants may be potted temporarily into pots just large enough to hold them, and placed in a cool house to make a start. Young plants raised from cuttings this season will require gradual hardening off.

Preparing the Ground.—To grow these well the ground needs to be in good order. Trench or dig deeply and work in plenty of humus. This is best done a few weeks prior to planting.

Cannas.—For bedding purposes the roots should be examined and started into growth in a cool, light structure.

Sweet Peas.—Another sowing of Sweet Peas may now be made in pots for planting out later to maintain a succession of flowers. Have the ground well prepared for those shortly to be planted out, if not already done. If planting in clumps is the method adopted, excavate the soil 18 inches or 2 feet, break up the bottom, place a good layer of manure in the bottom and return the natural soil. The addition of some fibrous loam, with a dusting of bone-meal and soot, will be beneficial.

Pentstemons.—Cuttings that were taken last year and rooted several in a 5-inch pot will make better plants and feel the planting less acutely later on if potted now singly into 3-inch pots. One crock in the bottom of the pot will suffice. Keep the plants close for a day or two, when gradually admit more air to render them fit for their permanent quarters towards the end of April.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Gooseberries.—Generally, unpruned bushes may now be safely pruned, preferably by thinning.

Figs.—These do fairly well in the warmer districts, and should now be prepared by pruning and rearrangement of the shoots for another year. Allow 8 inches or 9 inches between them, and do not shorten the young growths.

Peaches.—A large proportion of buds may be rubbed off at once, thus saving labour and benefiting the trees. There is still a certain risk from morning frosts destroying the young fruits.

Outdoor Vines.—These are decorative rather than fruit-bearing, though occasional bunches are produced. Pruning should no longer be delayed, and as occasion allows, lengths of young wood should be substituted for old, worn-out material. The Miller Grape and Burgundy are suitable sorts.

The Vegetable Garden.

Vegetable Marrows.—Seeds may now be sown for outdoor cropping, one seed in a 4-inch pot, starting them in a warm pit.

Broccoli.—A sowing of all sorts on a west border should be made in the course of the incoming week; sprouting varieties must be left till later.

Cauliflower.—King of the Cauliflowers and Magnum Bonum may also be sown to produce heads during summer and autumn. Walcheren does admirably in some gardens, and this also should be sown now. On very light soils sow the seeds in patches and thin out instead of transplanting them.

Savoy.—Make also a large sowing of this good winter vegetable, Drumhead for kitchen use and Green Curled for the dining-room. Allow plenty of space for the seeds, and the seedlings will be all the stronger. Drumhead and Winningstadt Cabbages, if required, may also be sown, like Savoy, very thinly, and the latest batch of Brussels Sprouts may be sown, too, in the course of the week.

The Flower Garden.

Crown Imperials.—Give strong growths the support of a short stick to prevent them breaking from the roots.

Polyanthuses, as well as Primroses, may be sown now on a shady border. The seeds must be only slightly covered.

Asters.—I raise all these in cold frames, sowing them at this time on prepared beds of light compost. The bed of soil should be thoroughly moistened a few hours previous to sowing the seeds, which are covered with some of the unwatered compost. Protect from sun with mats.

Annuals.—Most of the hardy annuals may be sown either where they are to flower or in prepared beds for transplanting later. Prince's Feather and Love-lies-bleeding must be reserved for a few weeks longer, or else be sown in 2½-inch pots and raised in a pit to be planted out in May. To have *Salvia Horminum* or Blue Beard very strong, it should be forwarded in the same way.

Stocks.—A like method may be practised with Ten-week and other annual Stocks, sowing three or four seeds in each 2½-inch pot, afterwards removing all the seedlings but one. Treated in this way, the plants, on being put into borders, experience not the slightest check. Where there are many hundreds of seedlings raised thus, much labour is saved by arranging the pots in wooden trays, in which they are moved about as required.

Dahlias.—If it is proposed to plant old tubers, which come into flower much earlier than those from the current season's cuttings, they should be started at once, and can be safely planted just like Potatoes two weeks hence. Tuberous Begonias do fairly well treated in the same way, but they flower late.

The Greenhouse.

Cyclamen.—Those at present in 2½-inch pots should be transferred to 4-inch ones before they experience a check.

Begonia Gloire de Lorraine.—Rooted cuttings may need potting on, using a very open compost and potting very loosely. Another batch of cuttings, if needed, may be taken at once and the old plants thrown out. Reserve a few of the later-flowering plants for the greenhouse stage.

Coleus.—A few of these are useful. Cuttings root in a day or two in a stove propagator, and by attending to repotting as the plants need shifting and using a rich and porous compost, large specimens are rapidly produced. But quite useful plants can be grown in 5-inch and 6-inch pots, firming the material rather more than were further shifts to be given. *C. thyrsoideus* should be rooted at the same time. It succeeds with less heat than is needed to force on the variegated forms.

Hydrangeas.—Old plants which have been wintered in sheds should now be started into growth. Those needing repotting or placing into new tubs must not be touched till growth has commenced. A proportion of the old soil, and roots as well, if they are abundant, should be removed previous to repotting, which should be done quite firmly. Small plants for the greenhouse will force readily in a stove temperature, and if cuttings have not yet been taken, no further delay should occur. Young, soft shoots root freely in a hot frame, and will make very desirable forcing material twelve months hence.

Acacias.—These flower at varying times, but they all need similar treatment. Once the flowers are past, the shoots should be pruned hard in, else the plants will get extremely unsightly and not be so floriferous. When growth recommences, big specimens should be turned out of their pots, the balls of roots reduced and returned to the same pots. Loam and sand suit them for a compost. Small plants, of course, need larger pots, but these also should have a portion of the tangled roots removed before repotting.

R. P. BROTHERSTON,

Tynningham, Prestonkirk, N.B.

NEW AND RARE PLANTS.

AWARDS OF MERIT.

Corylopsis veitchiana.—A new species from China, and not unlike *C. multiflora*, certificated a fortnight ago. The flowers are yellow, with brown anthers. From the Hon. Vicary Gibbs, Elstree.

Primula knuthiana.—A new hardy species collected in the mountains of the Tai-pei-shan province of Shensi, North China, by Mr. W. Purdom when plant-hunting for Messrs. Veitch. Its nearest ally is, to all appearances, the so-called *P. frondosa*, of which it is a glorified form. The species is obviously a variable one, the plants shown demonstrating this unmistakably in the size and colouring of the flowers. When more fully established, the plants may be expected to attain a much greater vigour than those now shown. From Messrs. James Veitch and Sons, Limited, Chelsea.

Prunus Pissardii Moseri flore-pleno.—A pretty variety with semi-double flowers of pale pink colouring. Obviously a good addition to the list of early-flowering deciduous shrubs, and a plant destined to be in request for forcing. From Messrs. James Veitch and Sons, Limited, Chelsea.

Rose Rose Queen.—A new Hybrid Tea of sterling merit obviously as a forcing variety, and one not likely to clash with any existing sort so far as that department is concerned. The shapely flowers are of the Lady Ashtown build and character, with possibly somewhat of the colour tone of Caroline Testout. Exhibited by Mr. W. E. Wallace, Eaton Bray.

Abies Douglasii fletcheriana.—This is a pigmy form of the type, the fifteen year old plant shown being less than eighteen inches in height, and of considerable density and formality of outline. From Messrs. Fletcher, Chertsey.

Hippeastrum (Amaryllis) Rose du Barri.—The name here given is more or less descriptive of a colour quite new in these plants, and, seen in a wholly self-coloured flower, is superb in the extreme.

Hippeastrum (Amaryllis) Musigay.—The colour is intense maroon crimson of a velvety lustre and finish, a magnificent variety in every way. Exhibited by Lord Rothschild, Tring.

Narcissus Helios.—Said to be a Barri, but, if so, it has the giant proportions of a big Sir Watkin, which it leaves very much in the rear in its refined beauty and comeliness. The colour is a good yellow, the perianth segments broad and overlapping, the giant crown, which is of the expansive type, tinged with flame colour on orange. A flower of perfect balance and symmetry (see illustration on page 160). From Mr. Walter T. Ware, Bath, and Mr. C. Bourne, Bletchley.

Narcissus Robespierre.—This is one of the finest of the incomparabilis class, a flower measuring 4 inches across the perianth, the crown being 1½ inches in diameter. The great feature of this sterling novelty is seen in the fiery crimson crown, the colour extending to its base.

Narcissus Rubellite.—This is a Poetaz form, and, so far as we remember, the first possessing such a brilliantly-coloured eye to be honoured by an award. It is a strikingly beautiful variety. These two were exhibited by Mr. A. M. Wilson, Bridgwater.

The following awards were made by the Orchid committee: First-class certificate to *Odontoglossum crispum* Samuel Gratrix, shown by

S. Gratrix, Esq., of Manchester. An award of merit was made to *Odontoglossum* Queen of Gatton (parentage: *O. Triumphans* × *O. periclitum*), shown by Sir Jeremiah Colman, Bart. A similar award was granted to Lieutenant-Colonel Sir George Holford, K.C.V.O., for *Cattleya* Dirce Westonbirt Variety. Parentage: *C. Vulcan* × *C. Warscewiczii*.

The foregoing were shown before the Royal Horticultural Society on March 19, when the awards were made.

DAFFODIL NOTES.

TO anyone visiting Vincent Square on the 19th inst. it was obvious that another Daffodil season had begun in reality. A white-bearded gentleman who must well remember pre-Daffodil days was standing beside me looking at the new lovely soft yellow-coloured *St. David* on Mr. C. Bourne's stand when, after a moment's pause, he unexpectedly exclaimed, "When are they going to end?" We both agreed we did not think it would be in the lifetime of either of us. Year by year the tide of seedlings flows stronger and stronger, and as each season passes, along the high-water mark we find new and uncommon forms and colours. Tuesday in last week gave us a foretaste of what we may expect 1912 to bring us. Messrs. Barr and Sons, Mr. A. M. Wilson, Messrs. Bath, Limited, the Rev. G. H. Engleheart and Mr. C. Bourne all had something novel in their groups.

A Striking Novelty.—Perhaps the most striking one was the *Ajax* on Mr. Engleheart's stand with a pale warm pink trumpet and ivory perianth. Diameter of perianth, 3½ inches; trumpet, 1½ inches long by 1½ inches at the mouth. One of its ancestors was *albicans*, and by working on this with appropriate pollen, "Engleheart's Pink," as I should like the flower to be called, was evolved. It may be remembered that Mr. Adams of Wolverhampton exhibited a somewhat similar break last year which had been "made in Holland." These straws suggest the question, "Where are we going to end?"

Daffodils to Remember.—If one could imagine that we saw Castile through a magnifying-glass which not only enlarged perianth and cup, but also had the power of brightening the dull red of the latter, we would get as a result something like *Robespierre*, which stood out as the most conspicuous flower in Mr. A. M. Wilson's group. Its brilliant red orange cup is a very attractive bit of colour, and it richly deserved the award of merit which was bestowed upon it. It has a 4-inch perianth, and the cup is at least 1½ inches across. I ought to mention that there is only one bulb for sale, and that is priced at £20. *Rubellite*, from the same collection, also obtained a similar award. It is a glorious *Poetaz* of large size. As a rule, there seem to be two flowers only in a truss, which, I think, rather detracts from its appearance. It has a white perianth and an all-red eye. *Gyrfacon* is a peculiarly taking giant *Leedsii*, "quite a show flower." Size: Perianth, 3½ inches; cup, 1½ inches long and 1½ inches wide. Its perianth is slightly campanulate; and each of its segments is formed on the spade ace pattern; but its chief charm is the delicate suggestion of green, which is apparent throughout the whole flower. *Enone* is one of the old-fashioned *Leedsii*s, almost a self. Its

shade is difficult to describe. To me, green (*à la* blue) skim milk suggests what I mean. *Sealing Wax*, so named because of its solid red eye, is a good strong grower and "the earliest of all the reds and whites." Perianth, 2½ inches, and eye three-quarters of an inch in diameter. All the foregoing were exhibited by Mr. Wilson.

Messrs. Barr and Sons, whom I would like to personally congratulate on their excellent display, which was awarded a silver-gilt Flora medal, had many single specimens of new trumpets of varying degrees of excellence. As there were two flowers of the famous *Michael* there, one was able to make comparisons. In the early morning I do not think any had names, but long before the close of the show several of them had been christened. Who the godparents were who gave them their names I do not know, but they had picked out the best. *Cyrus* appealed to me very much. It certainly has a look of *Michael* about it, and it is much the same in size, but with a much less campanulate perianth. It failed in that it lacked that rich smoothness of texture which is the older flower's special characteristic. *King Arthur* was another good yellow, and *Atlas* was a large bicolor, 4½ inches across the perianth and with a 2-inch-long trumpet conspicuously recurved at the mouth. Those who dislike violent contrasts, such as we get in *Empress*, will like this bloom, but I must say I like a clearer-looking perianth. *Athene* had her photograph taken during the course of the show. I hope she has had justice done her, for I have persuaded the Editor to let readers have a peep before very long. Remember, please, *Athene* is coming!

As I am confining these notes to the newest of the new, I will only mention *Vulcano* before I pass on to Mr. Bourne's flowers. I propose to deal with the older varieties in the different groups next week. *Vulcano* is the best of the *Copeland* doubles, in that it is quite symmetrical in form and the colour contrast is good and well proportioned, the red bits peeping up among the deep yellow being "just about right." I wonder if the lady to whom Mr. Herbert Chapman introduced me saw this flower and what her opinion of it would be. She told me the Daffodil that she liked best of all in the hall was the *Primrose Phoenix* on Mr. Bourne's stand. It is refreshing to meet a genuine and unsophisticated lover of doubles. I, perhaps, see too much of the monstrosity in them to make my judgment sound.

The cynosure of the Bletchley flowers was again *Helios* (see illustration, page 160); but whereas two weeks ago we saw it as a pot-grown bloom, on this occasion it had been cut from the open, and, furthermore, it had now an award card round its neck. Everyone at the committee thought it a very fine thing, and voted accordingly. By the way, its future address will be Inglescombe Nursery, Bath. *Thora*, the lovely pale cinnamon-cupped giant *Leedsii*, was shown in fair form, but I suppose because of the season it had not quite the same deep tone which created such a sensation last year at Birmingham. This, too, went the way of so many good things. Inglescombe again! You must know a unique specimen of the species *cormorant* dwells there. It is one that is never, never greedy, but is sometimes rather hungry, especially when the scent of Daffodils is in the air. The soft sulphur-clothed *St. David* again appeared, but something must have happened. If he were not a saint, I should have said his wife had smartened him up—his halo (*I beg pardon, perianth*) was so much flatter and

tidier, and his massive, squat trumpet had lost its ungainly appearance. I know now. His instinct told him he was going to Inglescombe—and he went. But my allotted space must be filled, and I, too, must go—to sleep. JOSEPH JACOB.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

HERBACEOUS BORDER (Wigtownshire).—The best time for mulching with organic manures, or these and leaf-mould combined, is the late autumn months, so soon as flowering is over and dead stems are removed. Done at that time, it acts in a protective capacity, and later its manurial properties are washed down into the soil and the plants receive the full benefit in their turn. If a dressing of manure be given, it should be dug in about the clumps forthwith, and, if room permits, there is no reason why this should not be done. The manure should be thoroughly decomposed and short, so that it breaks up readily. Any of the artificial manures advertised in our columns could be used at a later date, say, a month or six weeks hence, lightly pricking these in with a fork at the time of sowing. The Carnations might be top-dressed at any time, using good loam and leaf-mould, and bone-meal at the rate of a 6-inch potful to each bushel of the soil. Give an inch-thick dressing of the mixture, and press it rather firmly to the existing soil.

TWELVE HERBACEOUS PLANTS FOR JULY EXHIBITION (W. B. C.).—If, as we imagine, you are entering the competitive classes, much will depend upon the schedule and its wording, particularly with regard to such important matters as whether bulbous plants would be admissible. In the selection given we are assuming that they are not, and, therefore, give prominence to other things—Iris Kämpferi, Hemerocallis flava, Lathyrus latifolius The Pearl, Lupinus polyphyllus albus, Monarda didyma, Heuchera sanguinea, H. brizoides, Helenium pumilum, Galega Hartlandii, Gaillardia grandiflora, Erigeron speciosus, Delphiniums, Campanula Moerheimi, C. van Houttei, Chrysanthemum maximum, C. Robinsonii, Coreopsis lanceolata and Achillea The Pearl. You should plant a group of each, and not less than three plants. You will find it difficult to grow climbers satisfactorily on a pergola overhung by trees, particularly if much shaded. If, however, you are not expecting much flower, you might plant Akebia quinata, Aristolochia Sipho, Vitis vinifera purpurea (this requires sunlight to colour it well), Clematis montana (for flowering early before much leafage is obtained), Lonicera aurea reticulata, Periploca glauca, Polygonum baldschuanicum and Wistaria sinensis. Usually, of course, the many species of Chinese Vines are well suited to the pergola and provide a rich leaf-colouring in autumn, while Clematises and Roses are without equal, provided circumstances will admit of a good flowering. The question as to what is best depends entirely upon the amount of shade, and of this you say nothing.

TREES AND SHRUBS.

TREES FOR WIND SCREEN (V. M. H.).—The Austrian Pine (Pinus austriaca) is the best shelter tree for the purpose; but you do not say what trees you have planted. In order to form a thick and permanent hedge, you could not do better than plant the common Holly.

INJURY TO STEMS OF AUCUBA (G. R.).—We have not heard before of rabbits gnawing the base of Aucuba japonica, but certainly the tooth-marks point to some such animal being the culprit. Bank-voles, however, very frequently gnaw young trees in the manner shown, and it may possibly be that they have been at work here.

EVERGREEN FOR NORTH WALL (Mrs. E.).—If you exclude green Ivy there is really no good evergreen climbing plant suitable for the position you name as far North as Yorkshire, for variegated Ivies are not likely to prove a success. You might, however, try an ordinary shrubby plant and keep the branches fastened to the wall until the space is well covered. Crataegus Pyracantha would

be as good as anything for the purpose. This might be planted any time between the present and the middle of May. Do not select large plants, for small ones can be established more easily. As a rule, good examples may be obtained in pots, and there is little chance of such plants going wrong. A plant of Jasminum nudiflorum might be introduced with the Crataegus.

FRUIT GARDEN.

LOGANBERRY ATTACKED BY BEETLES (G. W. N.).—The Loganberries have, no doubt, been attacked by the beetle Byturus tomentosus, which lays its eggs in the flowers of the Loganberry, Raspberry and Blackberry, the larvæ feeding in the berries when they hatch out. The pest is rather a difficult one to deal with, since it pupates in and about the stools of the plants, flies quite freely in bright weather, and is found on wild plants common in hedges, and so on. Probably the best thing to do is to shake the flowers well on a dull day over a sticky board, so as to capture the beetles. (Tar is a good thing to use.) This must be done as soon as the flowers open, and, as far as possible, Raspberries should be attended to also. Spraying might also be attempted then, and lead arsenate paste should be used. It is at best only a partial remedy, and no effort should be spared to capture the beetles. They feed on the pollen of the plants named, and do some amount of damage in that way. They also attack Strawberries. They are small brown beetles, with distinctly hairy wing-cases.

GRAPE-GROWING UNDER BLACK SURROUNDINGS (J. G. K.).—We regret we have no information with regard to the experiments to which you refer, but it may be taken as proved that Grapes will ripen as well in the dark as they do in the light, and temperature has more to do with the matter than light, both as regards sweetness and colour; but anything that interferes with the access of light to the foliage will interfere with the attainment of full size, and especially of sweetness in the Grapes. Experiments recently carried out in France indicate that the number of leaves left in the shoot beyond the bunch of Grapes determines, to some extent, their sweetness; thus, two leaves allowed the production of Grapes which were less sweet than was the case where three leaves had been left. It would certainly be worth while trying the experiment of enclosing bunches of outside Grapes in paper bags (not necessarily black) to ripen, for the temperature would be considerably higher inside than outside the bags. It is interesting to note that it is the common practice in Japan to enclose fruits in paper bags. It is said they ripen well, are well coloured, and protected to a large extent from attacks by birds, insects and fungi.

MISCELLANEOUS.

LEAF-MOULD UNDER BEECH TREES (J. K. M.).—The leaves of the Beech make the best of leaf-mould, and it may be safely used for potting purposes. In this respect the leaves of the Oak are about on a par with those of the Beech.

INJURY TO LETTUCE (C. L. de T.).—The chief cause of the trouble with the Lettuce appears to be the attack of white worms and other earth-loving pests; but this seems to have been encouraged by having a rather sour soil containing too great a quantity of decaying vegetable matter and by insufficient ventilation. The soil might well be watered with weak lime-water, or with water containing about one ounce of sulphate of potash to the gallon; but the important thing to do in the future is either to sterilise the soil with steam or to find fresh soil altogether.

POULTRY AND RASPBERRIES (Le S.).—To prevent the possibility of harm to the buds or foliage of the Raspberry canes by allowing the poultry to run among them, it would be better to protect the canes by fixing light faggots of Thorn branches round their base as high as the fowls can reach. They can then do no harm. Annual Rye Grass would, we think, give you the best result. It would never do to sow Dandelions. They root so deeply and strongly that they would soon overrun the place and ruin the Raspberries. Do not let the grass grow within 1 foot of the stems of the canes, or they will not fruit so well.

LOW PLANTS FOR A GLASS PORCH (Novice).—It is quite impossible to suggest anything that will fulfil your most exacting requirements. Bulbs potted in the autumn will serve to maintain a display at this season; and for the summer such subjects as Browallia elata, Lobelia tenuior, Nemesis Blue Gem and White Gem, with Petunias, may now be sown. We think that a selection of tuberous Begonias would, during the summer, prove very satisfactory. We may say that there are no plants which have good foliage, produce plenty of bloom, will grow without fire-heat, and, above all, reach only a foot in height, this last item being a very heavy handicap. We have in our mind's-eye a very similar situation to yours which is always attractive. The main subjects employed are hardy Ferns and small specimens of such hardy shrubs as the more select Ivies and the several varieties of Euonymus. These form the permanent occupants of the structure, and are enlivened by a few bulbs in spring, and by tuberous Begonias and Campanula isophylla, both blue and white forms, in summer. In autumn and winter a few berried Aucubas, with Polyanthus and Forget-me-nots, potted up from the open ground, bridge over the time till the bulb season comes round.

NAMES OF FRUIT.—E. A. F. Beaumont.—1, Hawthornden; 2, Dutch Mignonne; 3, Old English Crab. J. C. H. Matthews.—1, Annie Elizabeth; 2, Newton Wonder.

NAMES OF PLANTS.—J. B.—1, Celsia Areturus; 2, Cyrtomium falcatum; 3, Ampelopsis Veitchii (Vitis inconspans); 4, Eranthemum nervosum; 5, Chlorophytum elatum variegatum.—P. H.—1, Passiflora species; 2, Sutherlandia species, possibly frutescens; 3, Passiflora species (?); 4, Rehmannia angulata; 5, Cestrum elegans. Specimens should be sent in flower.—J. C., Dundee.—Pittosporum eugenioides.—Col. J. C. Briggs.—The Violet appears to be a poor form of Marie Louise.—A. C. G.—Maxillaria rufescens.—A. L. Ford.—Billbergia nutans.

SOCIETIES.

READING GARDENERS' ASSOCIATION.

THE fortnightly meeting took place in the Abbey Hall (kindly lent by Messrs. Sutton and Sons) on Monday, the 18th inst., when, notwithstanding another very wet evening, there was a good attendance, the president occupying the chair. The lecture for the evening was delivered by Mr. H. Wilson, The Gardens, Lower Redlands, one of the association's oldest members, the subject being "How to Maintain a Supply of Vegetables Throughout the Year." Although the culture of vegetables has been rather freely dealt with at comparatively recent meetings, Mr. Wilson gave a thoroughly instructive paper on the production of an adequate and continuous supply for the whole twelve months of the year. A prolonged and highly-interesting discussion followed the conclusion of the lecture. On the proposition of the president, Mr. Wilson was accorded a hearty vote of thanks. Mr. F. Townsend staged a large and very beautiful collection of forced Narcissi from the vice-president's gardens at Hillside, which were greatly admired by all present.

THE HORTICULTURAL CLUB.

ON Tuesday night, the 19th inst., after the usual monthly dinner of this club, at which Mr. W. A. Bilney presided, Mr. H. C. Long of the Board of Agriculture gave an interesting lecture on "Weeds," illustrated by a large number of lantern slides. Starting with the definition of a "weed" as "a plant in the wrong place," he dealt with a considerable number of the most common weeds experienced in gardens, considering that as he was addressing a horticultural club it was better, in view of the vast number of other species with which it was the province of the agriculturist to deal, to concentrate attention on those which interested the members more particularly. Weeds, he pointed out, varied greatly in habit, and presented various peculiarities in the treatment requisite for their repression and extirpation. One great difficulty in the last direction was the prevalence everywhere of uncultivated spots, on which weeds were permitted to grow entirely unchecked. This, of course, resulted in a practically inexhaustible supply of fresh seed, and as, in innumerable cases, these seeds were provided with means of wide dissemination by wind and other modes of conveyance, the most careful gardener was constantly handicapped by the immigration of fresh material. Some of the slides showed how the nursing grounds were maintained and encouraged on public places, where the authorities took no steps to remedy the evil by any sort of suppression. Many of the most pernicious weeds produce hundreds of thousands of seeds per annum, which become practically ubiquitous. Weeds belong to three categories—annuals, biennials and perennials. The first and second are the easiest to deal with, since their seedlings can be destroyed by hoeing and general surface cultivation; but the perennials, particularly those which produce underground creeping stolons or deep-seated tap roots, such as Couch Grass, some of the Convolvuli, the Dandelions and many others, if once allowed to obtain a foothold, require the most drastic measures of trenching to keep under, as the smallest portion of such rootstocks is capable in a very short time of re-establishing the plant, so that unless the disturbed soil be thoroughly purged, the supposed remedy may prove to be an aid to reproduction rather than the opposite. For the continued existence of such plants, however, it is essential, even in the most persistent of them, that they should be able to form foliage on the surface. The more drastically this is suppressed, the weaker and weaker grow the roots. The general moral of this is that the hoe is really the most effective instrument, since it can be used not merely to destroy the seedlings of the annuals and biennials, and thus prevent them seeding, but also, by constant cutting down of the creeping perennial foliage, of destroying these weeds also; but such treatment must be persistent to succeed. Spraying is also available in some cases, and a slide was shown where a field absolutely invaded by Dandelions scarcely showed a specimen on a part where spraying had been experimentally tried. Many of the slides showed the form of the various weed seedlings and also their root systems, and some very interesting data were given regarding the damage resulting to the growth of desirable flowering plants and crops generally by the robbing of soil nutriment and light resulting from neglected weed growth. Weeds, too, are often intermediate hosts of fungoid and other pests inimical to the proper tenants of gardens. After the lecture an animated discussion ensued, in which members and visitors participated, and it was pointed out that with a few cultivated plants, such as Harpaliums, Anemone japonica and the Michaelmas Daisies often proved so monopolistic and wide-spreading as to rank with maleficent weeds when allowed to have their own sweet will among other garden treasures. A hearty vote of thanks to the lecturer concluded the meeting.

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APRIL 6, 1912.

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LILIAM AURATUM.

[Merrett Bros., Stroud.

Above blossoms at time of photographing, measured 14½ inches across.

LILIAM AURATUM

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THE GARDEN.

No. 2107.—VOL. LXXVI.

APRIL 6, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The Sand Pear.—This is the common name of the Chinese Pear, *Pyrus sinensis*. It is the first *Pyrus* to open its flowers among the large collection of species cultivated at Kew. The flowers in colour and form resemble those of the common wild Pear, *Pyrus communis*, but open a week or ten days earlier. In addition to its value as a flowering tree in spring, the Sand Pear is delightful in autumn. At that season the leaves assume a deep red shade, rivalling those of the better-known *Crataegus Crus-galli*.

The Bardfield Oxlip.—This is a much more attractive plant than the many Oxlips of different colours we see offered for sale, and which can be raised from seeds. The true Bardfield Oxlip is more refined in every way, and is at present highly attractive in the rock garden and border with its distinctly pretty leaves and its heads of soft yellow flowers, which are not too large to look out of place, and are yet big enough to be most pleasing. It is a pity that the true Bardfield Oxlip is not more generally offered for sale by members of the nursery trade.

Hybrids with *Narcissus calathinus*.—At a recent meeting of the scientific committee of the Royal Horticultural Society the Rev. G. H. Engleheart made some remarks regarding the apparently very restricted distribution of this beautiful form of *Narcissus triandrus*. It is not apparently found outside a small area on an island in South Europe, about one and a-half degrees out of the latitude in which the type occurs on the mainland of Spain and Portugal. He also showed a beautiful and vigorous white hybrid between this and a variety of *N. Leedsii*, which might be likened to a hardy *Eucharis*. Several of these white and vigorous seedlings had now been raised. The committee unanimously recommended a certificate of appreciation to Mr. Engleheart for his work with these hybrids.

Double-Flowered Peaches.—A large group of double-flowered Peaches situated on a lawn in the vicinity of the Victoria Gate at Kew gives an excellent idea of the value of the various forms of *Prunus persica* for such a purpose, while good-sized trees growing in a shrubbery near the north end of the rockery and in other places bear testimony to their usefulness for other purposes. Whether white, rose or red flowered forms are grown, they are very attractive; but perhaps the showiest varieties are those with rich red flowers. These are conspicuous from a considerable distance and do much to brighten up the landscape and relieve the predominating colour—yellow—during late March and early April. As a rule, the Peaches are not at their best in the vicinity of London before April, but this year many trees

were in flower by the middle of March. Good varieties are *flore albo pleno*, white; *flore rosea pleno*, rose; *Clara Meyer*, rose; *dianthiflora plena*, rubro pleno and *magnifica*, red. When budded upon Plum stocks, they make vigorous growth, and nice bushy plants may be obtained in from two to three years from the time of working.

The Double-Flowered Marsh Marigold.—The dwarf, compact habit of this showy plant, together with its free-flowering qualities, warrant it attention from all who are interested in bog gardens or are responsible for the planting of the margins of streams or lakes, for there are few plants which may be more easily grown or which give a better account of themselves. Of much dwarfer and neater appearance than the type, *Caltha palustris*, it grows from 6 inches to 9 inches high. The double, golden flowers are $1\frac{1}{2}$ inches across, and the flowering season extends over a period of several weeks, from late March onwards. By dividing the clumps after flowering it is possible to create a considerable stock in a short space of time.

Continuous-Flowering Balsams.—We sometimes hear it regretted that the annual Balsams which used to be so universally grown are now seldom met with; but as a set-off we have several other members of the family, introduced in most cases within the last decade or two, that are at the present time popular garden plants. *Impatiens Sultanii*, now represented by three or four forms, was among the earliest of this class. A giant among Balsams and a most continuous-flowering species is *Impatiens Oliveri*, from Central Africa. It forms quite a large bush, and is very rarely without flowers. These are of a distinct soft mauve tint, and must be looked upon as among the largest of the genus. Another scarcely ever out of bloom is the bright vermilion-coloured *I. Holstii*, which in many places does well outside during the summer. *I. Herzogii* has larger flowers than the preceding, with, in some cases at least, rather more of a salmon tint.

A Beautiful Flowering Shrub.—It is difficult to imagine a more beautiful sight than a well-flowered bush of *Prunus triloba flore pleno*, for the delicate rose-coloured flowers are 1 inch across and borne with great freedom from most of the buds on the previous year's growth. In the South of England it may be grown as a bush in the open ground; further North it thrives more satisfactorily against a wall with a south or west aspect. Of late years it has become very popular for forcing for greenhouse decoration. For whichever use it is grown it is necessary to observe one item; that is, in order to obtain the best flowering shoots, it is necessary to prune the annual branches hard back to within an eye or two of the base as soon as the flowers have fallen, for it is only by this means that really good shoots can be expected.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Chionoscilla Blue Star.—This is a neat and bright-coloured seedling *Chionoscilla* of my own raising, and derived from the seeds of *C. Sphinx*, one of Mr. James Allen's raising. It is one of the few which did not "recede" to the *Scillas*, and is smaller than the *Chionodoxa* parent. It is a nice little starry flower of a very brilliant blue, and my little patch now presents a very bright appearance in a corner of the rock garden. We might, I think, make more of these *Chionoscillas*, and I had hoped to seed it last year, but my flowers had been picked last year without my knowledge, and my hope of securing seeds was thus frustrated.

A Pretty Snowflake.—An unusually prettily-coloured variety of the Spring Snowflake (*Leucojum vernum*), reached me the other day for naming. It appears to be a variety of the yellow-spotted *L. vernum carpaticum*, but it has a feature not much seen among the Snowflakes of spring. This consists in the interior of the flower being suffused with yellow instead of being a charming satin white, as is usual in the Spring Snowflake. This feature of this particular variety is only seen when the flowers are turned up, of course, but it is a form I have examined with much pleasure and interest. It came from a Cheshire garden where bulbous flowers are much appreciated.—S. ARNOTT.

Narcissi to Sell from the Open.—This is a subject which would admit of much discussion. In the present instance I am dealing with it from the standpoint of an observer who has had occasion to make careful enquiries from growers and from florists in a provincial town in Scotland, where *Narcissi* are sold as cut flowers in annually increasing numbers. The three most popular varieties seem to be Golden Spur, Barri conspicuus and Sir Watkin. The points involved are cheapness of bulbs when beginning the stock, free increase and a good flowering habit, together with the fact that they are easily grown and come into flower at a suitable time in the open, combined with supplying flowers which take the market well. Possibly it may betoken a poor taste on the part of the buyers, but it is found that these three sell as well to the shops as choicer and more modern *Narcissi* costing a great deal more. The fine colour of Golden Spur, the good effect of Barri conspicuus and the handsome flowers of Sir Watkin all tell. Quality of bloom from a florist's point of view is not so much desired as good colour and long stems.—BULB-GROWER.

Daffodils Under Glass.—The Rev. J. Jacob, in his excellent notes on "Daffodils Under Glass," page 152, March 23, raises an interesting question when he designates one who admires an uneven, irregular, decorative Daffodil as a "semi-educated person with an uneducated Daffodil eye, for such flowers appeal to him for their very unevenness." There are thousands of such persons, who, in the eye of the florist, are condemned for their bad taste, but who, nevertheless, possess an instinct for what is artistic and decorative. They may admire the beautiful and refined form of a Home-spun bloom; but place before them a Frank Miles, with its gracefully-twisted perianth, and they smile an appreciative smile. They are not all florists, nor likely to be; it is a vane which points the way the wind blows, and is called public taste.

Is this taste for the artistic catered for by the hybridist? I answer, No. He simply caters for the sacred circle of florists' flowers, which are too circular and even to be of much decorative value. I do not wish to disparage the remarkable advances made by cross-fertilisation, but I seriously think that more could be accomplished to encourage the development of the decorative Daffodil. With the aid of Mendel's laws, and for once violating the dictum of the florist, we may be able to create blooms of cactus, narrow-petalled, reflex, incurved, twisted and crested types.—J. E. D.

Crocus King of the Whites.—This is one of the newer varieties of the Dutch Crocuses, which, apparently, are once more taking a stride forward, several new varieties having come into commerce lately. King of the Whites is not only larger, but is better shaped than the old Mont Blanc, which is still a favourite. I have had this beautiful Crocus for a few years now, and as my clumps increase in size, so they do in beauty. It is now offered in several English catalogues, and is worth securing in autumn by admirers of the Crocus of spring.—X.

Fritillaria pallidiflora.—Although in cultivation for a good number of years, this Snake's-head Lily continues comparatively scarce and expensive. It is unfortunate that a greater demand has not arisen for it, as it might be increased by means of seeds, as it is not a bulb, which multiplies freely by offsets. It is a very distinct member of the genus, having broad, glaucous leaves and handsome yellow flowers. It is an excellent subject for a fairly dry place in the rock garden, although it will do in a moister one. I grew it for years along with some others of the genus not often seen in a dry, sandy border with an open and light subsoil, and, although it was dwarfer there than in stronger soil, it did well in every way. It should be planted about two or three inches deep in early autumn. It may be added that the yellow flowers are prettily chequered in the interior. It was introduced from Siberia in 1880, and is quite hardy.—T. T.

English-Grown Hyacinths.—The interesting little note by the Rev. Joseph Jacob on page 142, March 23, on the group of Hyacinths shown by Messrs. Bath reminds one of the "Scottish-grown Hyacinths" which we read of in Justice's "Scots Gardiners' Director," and which were raised from seeds and offsets by the author of this book, the preface to which is dated 1754. Justice gives a full account of his procedure in saving and sowing seeds from his Hyacinths, and also from offsets, while he tells us that his flowers were as good as those from Holland. It would also appear from his account that the bulbs were better than the Dutch ones. His description of his methods is too long to quote, but it is well worth reading by those interested in the question. If Justice could raise in Scotland flowers equal to those from Holland, and, as has been shown by Messrs. Bath, good bulbs can be produced in their grounds, there seems little reason why the cultivation of these bulbs on a commercial basis should not be largely engaged in.—A.

How to Arrange Daffodils.—As Mr. Herbert Chapman has introduced my name in connection with this subject in THE GARDEN for March 23, page 142, perhaps I may be allowed to follow it up. I need hardly say that I agree with his views, and I am very glad that he has raised this question, which I hope will be discussed by other lovers of the Daffodil. It seems to me that if we are to

arrange our Daffodils in straight lines and triangles, with every bloom in an "eyes front" position, it would be better to show them on boards or boxes like Pansies or Dahlias! Of course, when one is arranging flowers for classes at Daffodil shows—where the number of vases is fixed and where the number of blooms to a vase is generally restricted to three—it is almost impossible to avoid stiffness and straight lines; and in this case stiffness and uniformity are perhaps advisable, as the object of such classes is comparison. But surely in a group of Daffodils, when there is no fixed limit to the number of vases or to the number of blooms in each, the object aimed at should be to arrange the blooms so as to show their grace of form from as many points of view as possible, and to make the effect of the whole as light as possible and to avoid flatness. An artist has a great eye for perspective, and surely this is as desirable in a group of flowers as in a picture. A flower which can only be looked at from one position and which has no profile is not, in my opinion, an ideal flower, and this applies to groups of flowers. There seems to be a tendency at the present time to arrange Daffodil groups as if lining a grave or as if trying to imitate a wall-paper. Of course, there is the other extreme. One sometimes sees Daffodils literally thrown into vases and dumped down anywhere on the staging. Every vase of blooms must be grouped in itself, and the varieties must be blended as to colour and form, but this is the whole art of arranging, and the "highest art is to conceal art."—CHRISTOPHER BOURNE.

—Mr. Chapman, in his note in THE GARDEN of March 23, page 142, has opened a door for the discussion of a subject which will interest all who have the welfare of the Daffodil truly at heart. So much has been done of late years in the way of improvement in the methods of exhibiting flowers that we may well pause to consider whether the Daffodil is treated in the best style, or whether we might not add to the artistic effect of our exhibits in some way. Look at Carnations and Roses; how much better in every way is the present mode of showing the blooms with stems and foliage than the absurd way (now, I am thankful to say, almost obsolete) of showing the flowers stuck into a green board and, in the case of Carnations generally, mutilated and backed by the ridiculous paper collar! Who could possibly tell from such samples what the real capabilities of the plant were? I am not saying that the Daffodil is, as yet, suffering much from dressing, though I regret to say I have seen paper collars used to keep the perianth from reflexing, and it seems a great temptation to some to use their thumb on a flower that does not naturally want to lay its cup quite flat against the perianth. Surely a flower, if it is worth showing at all, needs neither the paper collar nor the assistance of the thumb. Mr. Chapman refers to a remark that was made about Mr. Bourne's lovely exhibit at Vincent Square. I was at a loss to understand the meaning of it, and am ready to join issue with any so-called true florist who wishes to see the bloom only and thinks of nothing else, caring little whether it has a graceful stem and, still less, looking for tasteful arrangement. If the Daffodil is to climb to the topmost rung of popular favour, which it is fast doing, we must exhibit our flowers in such a way that we show the great possibilities it offers for decorative effect, and not fall back into the rut which the old-fashioned florist was so much inclined to be content with.—W. A. WATTS.

Why Snowdrops Fail in Some Soils.—I have read with much interest the correspondence in your issue for February 17 and March 2 on the above question. In this district (West Ilsley, Berks), where the soil is of a light nature on chalk, there is no difficulty in growing the double Snowdrop, but it is almost impossible to grow the single variety. I have planted several hundreds of bulbs, and the only ones that have really succeeded are a few that I brought from Leicestershire some years ago and planted just as they had started into growth at the end of December or beginning of January. These bulbs were growing in the shelter of bushes, and were on the surface of the ground when I moved them. Do any of the bulb-growers sell their bulbs from the open ground as they are starting into growth, say, at the end of December? as it would be interesting to repeat the experiment.—F. W. H.

The "Rock Garden" at Edinburgh.—Your correspondent's laudation of the rockery, page 129, March 16 issue—it cannot properly be called a rock "garden" now—in Edinburgh Botanic Gardens is misplaced. As one who was well acquainted with the old rock garden, I can aver that as a home for alpine plants the place has been ruined. Under the old system, though the "pockets" were perhaps a little too formal (a detail which could easily have been rectified), one could be sure, at this time of year, of seeing delightful groups of spring flowers. Under the new *régime* there is little to be seen except huge masses of reddish rock, most of which must weigh over a ton each, so arranged as to give good scope for games of hide-and-seek among children, but of no use to plants. The proportion of rock to soil is such that it must be a continual struggle for existence among the unfortunate alpine plants dotted here and there. In fact, it has been shown already that, except in very rainy seasons, the sprinklers must be kept playing most of the summer days to keep the plants alive, making a visit to that part of the gardens in warm weather a most unpleasant experience. Those who protest against the extermination of magnificent Rhododendrons and the abolition of grassy slopes in order to provide more room for hideous masses of red stone are quite justified.—EDINA.

A Simple Arrangement of Narcissi in a Shallow Dish.—I enclose a photograph of Narcissi Barri conspicuus and Poeticus in a shallow dish 3 inches deep and about a foot in diameter. After trying many more or less elaborate, inefficient and costly contrivances, I found the following the most effective, durable and inexpensive. I bought a yard of the smallest wire-netting for a few pence and got the ironmonger to cut it into three 1-foot pieces. Each of these made a flower-holder. I took the 1-foot piece and began by bending the four corners to the centre; then placed it in the bowl, corners downward, and gradually crumpled it up till it roughly fitted and filled the receptacle. Then I covered it with a layer of moss, and found I had at last achieved a really satisfactory flower-holder. One has only to thrust the stalks of the flowers into the dish through the moss, and the several layers of wire hold them quite firmly in place, so that each day it is easy to lift the whole at once and empty, and refill the bowl with fresh water, and the flowers last much longer. This dish of Narcissi, in fact, had been arranged for some days, with no idea of it being photographed, when a photographer chanced to see it and expressed a wish to make a picture of it. A more artistic effect is gained by using fewer flowers,

so that they appear to be growing in the bowl. In summer I find it equally useful for sprays of Roses, Sweet Peas and many other flowers. It makes an agreeable change from the high vases (usually employed for flowers with long stems), of which one gets a little tired at times, and allows the use of tall flowers on the dinner-table without interfering with one's view of opposite neighbours.—AN AMATEUR.

Gold-Laced Polyanthuses.—The note by Mr. Bentley, page 118, March 9, and that subsequently sent by Mr. A. Dean, page 142, March 23, on the above, recall the pleasure one experienced long ago in growing these refined flowers. I can well recall George IV. and Lancer, besides a number of good seedlings, some of which were afterwards named. Seeds of gold-laced Polyanthuses are offered still, but I fear that the stock whence they come can hardly be expected to produce even a small number of flowers of the true, old-fashioned gold-laced Polyanthus we used to know. It had not the value in the garden that the self-coloured

THE KITCHEN GARDEN.

BRUSSELS SPROUTS.

FEW vegetables are more appreciated from October till April than the above, and to get as late a supply as possible I have found it advisable to rely upon seed sown in the open ground. Sow thinly to ensure strong plants; at the same time, give good land, so that the crop is not starved in any way. Of course, plants raised thus are not equal in size and do not bear the quantities of Sprouts that plants produce from seed sown under glass earlier in the year.

Suitable Varieties.—There are not a great number of varieties, but ample for all seasons, as mere variety does not assist the grower. At the same time, some kinds are more suitable for early supplies than others, and the dwarfer kinds, such as Dwarf Gem, are most suitable for late supplies. I have also found the medium



CUT NARCISSI ARRANGED IN A FLAT BOWL WITH WIRE-NETTING AND MOSS.

Polyanthuses have, but, to those who liked to study the individual beauties of the flowers, they were highly satisfying. Like the florists' or Stage Auricula, these gold-laced Polyanthuses are flowers for the devoted amateur who attends to the plants himself, and are especially plants for the man with a small garden with a frame or two. The decay of the hand-loom weaving had a great deal to do with the decadence of this flower, in Scotland as well as in England, and in places where the gold-laced Polyanthus, the Auricula, the show Pansy and other florists' flowers were so largely grown, the Polyanthus is but little seen now.—S. ARNOTT.

FORTHCOMING EVENTS.

April 10.—East Anglian Horticultural Club Meeting. Lecture on "Roses," by Mr. W. Mallet. Kingsbridge (Devon) Daffodil Show. Royal Caledonian Horticultural Society's Spring Show at Edinburgh (two days).

April 11.—Cornwall Daffodil and Spring Flower Show at Truro (two days).

or dwarf sorts more hardy than those which produce very coarse Sprouts, and they are superior in flavour. A large, coarse Sprout is by no means an ideal vegetable, and is less profitable. Such varieties as Paragon, Exhibition, Holborn, Paris Market Selected and Dwarf Gem are all excellent; but, of course, for sale purposes the larger varieties, such as Matchless, Giant Perfection and others, are favoured. The great feature of these kinds is to plant early, so that a large quantity of Sprouts are produced from the top to the base of the stem. When the lower Sprouts are taken, those above soon increase in size and are ready to gather, the large heads being retained till the plants have finished furnishing Sprouts.

Importance of Deep Culture.—Cultural details for these are not very different from those for other Brassicas. At the same time, owing to the plant being a deep rooter and requiring a lot of space, deep culture, no matter what kind of soil, is essential, so that the land should be well prepared in the winter by double-digging or trenching.

Large masses of rich manures are not advised, as these have a tendency to coarseness or large, open Sprouts. Hard, firm, close Sprouts are what is desired, and these set as close as possible up the stem without waste of any kind. I have also found, whenever possible, it is best to give this vegetable a change of quarters yearly, and always an open position. A cleaner and firmer growth results. Plants in any way coddled fail to produce a full crop.

Distance to Plant.—Another point is to give ample space between the plants; 2 feet at least should be allowed between the rows, and 18 inches between the plants in the rows. I have given the large sorts 3 feet, and gained by so doing, as the produce was better, firmer and less injured by sudden changes of weather. Though 3 feet may be thought somewhat liberal, it is an easy matter at the time of planting to put Lettuce between, or to sow a row of Spinach. These are cleared before the land is required for the Sprouts. Another great advantage in wet seasons is that it is much easier to gather the crop than when they are unduly crowded. For latest supplies from plants sown in the open, the smaller varieties do well 2 feet apart and 12 inches to 15 inches in the rows, according to whether the land is rich or otherwise.

G. WYTHES.

SEASONABLE NOTES ON VEGETABLES.

Hoeing.—It is quite impossible to over-estimate the importance of incessant hoeing in the vegetable quarters. In the summer the main value of the operation may lie in conservation of plant food in the soil; but earlier in the year it facilitates the admission of warm, fresh air, thus encouraging progress in the crops and, at the same time, prevents the establishment of weeds the seeds of which are now germinating so healthfully and abundantly. It is sound practice to run the hoe through the surface of the soil between the lines of plants as frequently as the time can be afforded, provided that the ground is not wet at the time of the operation. The Dutch hoe is the more convenient tool, but now and again it should be laid aside for the draw or cutting hoe, or, if that is not available, the blade of the Dutch hoe should be reversed and stabbed into the surface with a view to preventing the formation of a hard sole 1 inch or so down.

Planting Onions.—Onions raised from seeds sown in boxes at the end of January or during the first half of February will now be splendid, stocky plants where they have been hardily grown, and the sooner they can be placed in their permanent positions the better the results are likely to be. It is more than probable that one man may be going for big bulbs and another for a general

crop that will enjoy comparative immunity from the maggot; but this will not make the smallest difference as regards the desirability of prompt planting immediately the conditions are favourable. The site will, in either event, have been properly prepared, and in planting for big bulbs the lines should be 15 inches asunder and the plants a similar distance in them, while for smaller bulbs 12 inches between the rows and 5 inches, or even a little less, in them will prove satisfactory.

Outdoor Tomatoes.—Those who desire to have a crop of Tomatoes in the open quarters or on walls or fences in the garden during the forthcoming

and grow them on to one stem. Short-jointed plants which have grown steadily and strongly are the most valuable for outdoors.

Vegetable Marrows.—About the middle of the month is an excellent time to sow these seeds, and no efforts must be spared to ensure sturdy advance right from the start. Each seed should have a small pot containing a compost of loam, leaf-mould and sand, and it ought not to be necessary to transfer from these to pots of larger size. At the same time, a check due to cramping of the roots must be avoided, and this may force recourse to moving forward into a larger pot. It may be well to remind amateurs that seeds of the bush varieties sown after the middle of May where the plants are desired to fruit will yield splendid crops, and the plants do not occupy much space.

Autumn Green Vegetables.—Where a supply of Savoy is required for use in the early months of the autumn, and seeds have not yet been sown, the task must be accomplished at once. The plants demand a long season of growth, and, unless this is allowed for, disappointment must ensue. It is preferable to sow out of doors, thin distribution and early thinning being important rules to observe. Strong, stocky plants alone can produce satisfactory crops.

H. J.

GREENHOUSE.

RAISING FREESIAS FROM SEED.

IN continuation of what I wrote on Freesias and their cultivation in THE GARDEN for March 2, I now propose to give a few notes on cross-breeding and the raising and rearing of seedlings, which may prove of interest to readers, for one has only to get fairly started in work of this kind to find what an intense fascination it has. It is the first step that costs, and many a man, aye, and woman, too, who has begun this work in quite a small way has attained to considerable eminence in the pursuit.

Anyone sufficiently interested in Freesias could not do better than acquire the new set of varieties offered by Messrs. Van Tubergen, together with the yellow F. Chapmanii and the older species,

refracta, refracta alba and Leichtlinii. By the intercrossing of all the above-named there is no doubt that a number of novelties may yet be obtained by careful and systematic work. In my experience the crossing of Freesias is a game of delightful surprises, as, with so many other floral subjects, it is the least expected which often happens, and *vice versa*. It is for this reason that some people abandon the method of keeping records of their work. Up to the present time I have kept a complete record, in order to be able



THE BIRD OF PARADISE FLOWER OF SOUTH AFRICA (STRELITZIA REGINÆ). (See page 169.)

summer, and have not yet sown the seeds, should do so without delay. Early sowing must be deprecated for those whose conveniences are limited, but it is imperative that sufficient time shall be allowed for the plants to make progress; hence the suggestion of immediate sowing. For preference small pots to accommodate one seed ought to be used; but if pots are too few or space is too valuable, set the seeds thinly in pans or boxes, and, immediately they are big enough comfortably to handle, give them a pot apiece

to trace the pedigree of every seedling; but in a recent letter I have had from Mr. Van Tubergen, he tells me he has given up in despair the keeping of exact records of his crosses, as it is impossible to trace the influence of the parents in the seedlings, and everything turns out opposite to what one expects.

I can corroborate this from my own experience, and as a case in point I may note that last season I flowered a seedling which, although not true blue, was the nearest to blue I have ever seen, the parents in that case having been two varieties which I should have expected to have given, if anything, something of a chestnut or crimson shade. Occurrences like this are, no doubt, capable of scientific explanation; but I have no desire to weary readers with abstruse botanical problems.

How to Proceed.—The first thing to be done is to select the seed-bearing parent, and as all the Freesias seem to seed readily here, the selection presents no difficulty. As the flowers commence to expand, and, if possible, before the pollen appears, the anthers should be removed with a very small and narrow-pointed pair of scissors. I find these easier for the work with Freesias than tweezers, as one can remove all the anthers at one operation. Daily supervision and care are required to see that no anthers remain on the seed-bearing plant. As soon as the flowers of the above are fully expanded, pollen from another variety, duly selected for the purpose, should be collected on a small camel-hair brush and gently brushed over the points of the stigma; and in my own case I usually give a further application of the pollen on the following day, always inserting a small wooden label in the pot, naming the pollen-bearing variety used. I have very few failures, nearly every pod swelling up and producing seed, though the quantity of seed in a pod varies considerably. After some weeks the pods commence to turn colour, and then I go over them daily and pick all that are just commencing to burst, placing them in tiny wooden trays on a sunny shelf in the greenhouse.

Seed Sowing.—As soon as all the seed is ripe—generally in May or June—it is extracted from the pods and sown in shallow boxes, which are stood outside, and take their chance of sun and shower, until there is a danger of frosts commencing in the autumn, when they are transferred to a moderately warm greenhouse. Here I should say that the little plants begin to make their appearance in early autumn, and the boxes must, of course, be kept free from weeds throughout. The bulbs are usually left in these boxes for two years, and in June or early July of the second year they are shaken out. One of two methods can then be pursued, either (1) to pot all the bulbs singly in tiny pots, which is a laborious process, and will probably require an enormous number of pots, or (2) they may be potted five in a 5-inch pot, four round the sides and one in the centre.

As the plants come into flower, some careful method of marking the finest varieties is then necessary, a task which will tax the ingenuity of

the raiser. Here we take double precautions by placing a tiny wooden label against each bulb, and also attach one to the growing plant, thus making doubly sure of securing the right bulb when the pot is turned out. Some of the seedlings increase rapidly and soon grow into large stocks, while others are very slow, and a few will probably die out altogether.

Some people who have read the foregoing will probably consider the work of seedling-raising in Freesias a lengthy and laborious task, but the reward always comes to the painstaking man. Let that fact be thoroughly borne in mind from the start.

Rye, Sussex.

F. HERBERT CHAPMAN.

THE BIRD OF PARADISE FLOWER.

(STRELITZIA REGINÆ.)

THE genus *Strelitzia* comprises some eight or nine species and varieties, of which *S. Reginæ* is the most beautiful. The flowers are produced in a

should be performed early in the year, or plants may be raised from imported seeds. It is recorded that the seeds of *S. Reginæ* are eaten by the Kaffirs. All the *Strelitzias* are natives of South Africa.

W. T.

THE ROCK AND WATER GARDEN.

A PRETTY DWARF HYACINTH.

SOME of the dwarf Hyacinth species supply the garden with delightful little subjects eminently adapted for the front of the flower border or the rockery, and well worthy of planting in the grass to associate with Snowdrops and Crocuses. Of these the few species which have a considerable resemblance to the *Muscaris*, or Grape Hyacinths, although true



HYACINTHUS LINEATUS, A CHARMING DWARF HYACINTH FOR THE ROCK GARDEN.

spathe containing from four to eight flowers; these are very distinct and curious in form, and they are of a most brilliant orange and purple colour. The flowers continue to open all through the spring and summer months, remaining in a perfect condition for two or three weeks. Although the plant is generally treated as a stove subject, it will thrive and flower more freely when given the conditions of an intermediate house. During the summer *Strelitzias* require a liberal supply of water, but very little should be given in the winter months. Useful plants may be grown in 12-inch pots, using a compost consisting of two parts loam to one part peat, with a good proportion of coarse sand added. Where larger specimens are required, they should be planted out in a border, giving them a sunny position, when excellent results will be obtained. This *Strelitzia* can be increased by division, which

members of the genus *Hyacinthus*, are among the most pleasing. The best known of these is *H. azureus*, or *ciliatus*, erroneously called *Muscari azureum*. It is a valuable little plant, flowering, however, rather later than *H. lineatus*, an illustration of which accompanies this note, and is also less hardy. They differ mainly in the number of leaves and in their colour, *H. lineatus* being of a delightful light blue and having only two or, occasionally, three leaves. It is probably most pleasing in the form of a group, such as is shown in the illustration, these bulbs having been in their present position—in sandy soil on a low rockery facing south—for five or six years. There they are charming in February and March, with their little cones of light blue and their channelled leaves. This bulb is a native of Asia Minor, and was introduced in 1887. It is still rare in gardens.

S. ARNOTT.

THE FRUIT GARDEN.

SEASONABLE NOTES ON VINES.

OWING to the exceptionally hot weather of last year, the wood of the Vines matured splendidly. Notwithstanding this fact, the Vines have bled more than usual in many ordinary cases where pruning was done as late as Christmas Week. I certainly did not expect to see so much bleeding in the circumstances; but its effects have been mitigated by the freedom of the growth of the buds.

The Temperature.—Although the weather has been so unsettled of late, the temperature in vineries has been quite suitable for the Vines when supplemented by fire-heat on dull, cold days and at night. From now onwards it will be advisable

half-past three, according to the heat of the day—once more damp the path and borders. It is not wise to continue syringing the Vines after the young shoots have begun to grow freely. Do not at any time sprinkle water on the pipes when they are hot, because the sudden steam rising from them would scald the tender leaves.

How to Treat the Young Shoots.—The young side shoots should be about eighteen inches apart on both sides of each Vine rod, and if they are alternately placed, the shoots of one Vine will dovetail into those of another to a small extent, and so cover the roof of the house evenly with foliage. One shoot to each spur will be sufficient to retain. The others must be rubbed off, not cut. Do not attempt to tie down these young shoots until the bunches are approaching the flowering stage. The tips, of course, may be tied away from the glass, and every shoot must be pinched off at

On page 123 of *THE GARDEN* dated March several varieties in both the show and alpine groups were enumerated as suitable for the amateur to commence with. They were all excellent, as the writer knows from experience in his own collection and those of several friends, but they do not meet with the approbation of three growers on the south side of the metropolis. This is precisely as it should be. In appreciation of flowers it is extremely difficult to find two people with identical views. Knowing this to be an irrefutable fact, I was careful not to assert, or even hint, that the varieties named were the finest of their respective sections, and I said so in just about as many words, but simply that they had proved excellent and pleasing to me. To these expressions I hold at the present time. My critics argue purely from the exhibitor's point of view, and may not be aware, as I happen to be, that for one man who grows

Auriculas simply for exhibition, there are a score who grow them for the pure love of doing so and for the opportunity of enjoying the plants at all seasons of the year, but especially so when they are in bloom.

Mr. Douglas, than whose late father none was ever more highly respected in British—I think that I may safely say universal—gardening circles, confines his remarks to the alpine varieties; but he does not send an alternative selection, or I would most gladly embody it in these notes. In effect he says that for commercial purposes his father discarded five of them fifteen years ago, a fact which I regret, as I find them satisfactory. Mr. Douglas describes the example of Favourite as “as bad a specimen as could be selected,” but he will do me the justice to acknowledge that I did not praise the illustration. As a matter of fact, however, the plant depicted secured a premier award at a leading exhibition of the flower, so one would not think that it could be hopelessly bad.

Mr. Nash, in an excellent letter, regrets the mention of varieties that are now, in his opinion and that of other exhibitors, superseded, and goes further and better when he mentions an up-to-date selection. He deals with the show group in particular, and with the greatest pleasure I give his list: Green edge—Mrs. Henwood, Shirley Hibberd, Abbé Liszt, Abraham Barker and Rev. F. D. Horner; white edge—Acme, Heatherbell, Conservative and Rachel; grey edge—George Lightbody, Richard Headley, George Rudd and Olympus; self—Mikado, Favourite, Mrs. Phillips, Ruby, Harrison Weir, Mrs. Potts and Miss Barnett. I give the names in Mr. Nash's order, and may add in commendation that they constitute an analysis from the winning stands at the Southern Show, an event which I have only once missed in the last decade or more. I and readers of *THE GARDEN* shall be indebted to Mr. Nash if he will now most kindly compile a similar list of alpine varieties.

Mr. Gibson does not particularise to the same degree, but he sends a long letter of considerable interest naming some of his favourites, all of which are embodied in Mr. Nash's list just given. As far as thin sowing is concerned, he favours even



NARCISSUS SIR WATKIN IN A NORTH LONDON GARDEN.

to maintain a higher temperature. Cultivators must watch the weather and be sure to have some heat in the pipes before that from the sun's rays goes down too low. When the young shoots are about three inches long, the artificial temperature in the daytime should be from 65° to 70°, and at night 60° to 65°; 5° rise from sun-heat may be allowed before any ventilation is required; then open the top ventilators a little and allow a further rise of 5° from sun-heat.

Atmospheric Moisture.—The amateur should observe the following conditions when supplying the moisture essential to success: If the house temperature is rather low early in the morning, do not damp down the borders or path, but directly the heat commences to rise, damp the path; later on, the borders; and if the heat is very great with due ventilation, once more damp both path and borders. At closing-time—from two o'clock to

three joints beyond the bunch, and beyond the second joint if there is not room for the full development of the main leaves. Avon.

THE FLOWER GARDEN.

AMONG THE AURICULAS.

Varieties.—The action of the Editor in instituting a special column devoted to the Auricula has been more than justified by the letters of appreciation which have been received from various parts of the country; but it came as a surprise to learn the number of readers who were so keenly and intelligently interested in the subject. Evidence of this is demonstrated by the letters of gratification and also by those, invariably most friendly and courteous, of criticism, and it is to the latter that attention will be devoted this week

distribution, but would not allow the space which I invariably advocate to novices. F. R.

NARCISSUS SIR WATKIN UNDER TREES.

IN some past issues of THE GARDEN the question has been raised as to whether Narcissi bulbs were better if lifted or left untouched. Which view held the field has slipped my memory, but I am enclosing a photograph that certainly favours the let-alone theory. The group shown was planted seven years last autumn, and has never been disturbed in any way. The plants are growing under an Oak tree, and the sub-soil is mostly clay, while the only assistance they get is a sprinkling of chemical manure every spring when they are 1 inch or 2 inches high.

Highgate.

C. T.

VIOLAS AND THEIR CULTIVATION.

FOR profusion of bloom extending from early spring to late autumn there are no better flowers for bedding than the Violas, although in planting them for this purpose discretion must be used in selecting the varieties. The exhibition kinds, as a rule, are not suitable, the exception to the rule being Agnes Kay, Mrs. Chichester, Lady Grant, Moseley Perfection, Louie Granger, Jenny Macgregor and a few others.

To show up to advantage they require planting in beds of the same colour; and what looks better than a bed of Rose Grüss an Teplitz (dark red) with a groundwork of Violas Meteor or Moseley Perfection (both yellow), or Rose Peace (cream) with a groundwork of Maggie Mott (mauve) or Mauve Queen? Then, again, the bedding varieties make admirable edging plants, and keep in bloom from early May until November; in fact, I might go so far as to say that I have had them in bloom around the borders throughout the whole of the year without any protection whatever.

Planting.—The soil should be well dug over and broken up to a depth of 1½ feet to 2 feet and some good rotten manure put in, also a little bone-meal and leaf-mould. The planting should take place now, and the surface should be slightly sprinkled with superphosphate of lime and forked in—with a hand fork for preference—not deep, only a few inches. The ground should be made fairly firm. For bedding, the plants ought to be put in about one foot apart, but for exhibition purposes quite 18 inches. They should never be allowed to get too dry. The blooms, as they fade, must be picked off daily; this is most imperative if a succession of bloom is required, and once a week it is necessary to go round each plant with a hand fork and just loosen the soil, say, 1½ inches to 2 inches deep, not deeper, or the roots will be injured.

Summer Treatment.—About June a thin layer of well-rotted manure which has passed through

a half-inch meshed sieve should be put around each plant. A very good liquid manure for them, if large blooms are required, is Canary Guano or soot-water given alternately twice a week. The liquid manure should never be given them when the ground is in a dry state, but after a fall of rain, or the plants should have a good watering first. Propagation is best done by means of cuttings taken in the autumn—September for preference. In selecting the cuttings, care should be taken to obtain the young growths from the centre or base of the plant. Do not try to strike any growths that are showing bud or any that have bloomed. They should be placed in rows in a cold frame, allowing about three inches between the cuttings.



STAPHYLEA COLCHICA, A BEAUTIFUL HARDY SHRUB WITH CREAMY-WHITE FLOWERS. (See page 172.)

The soil should be made up of loam and grit or coarse sand in equal parts. The plants root very readily. The lights ought to be kept on (and shaded) during the day only; this should be continued for a period of seven to ten days. When the cuttings have begun to root, the lights may be kept off altogether, except in very severe weather. Coddling must not be allowed. All dead leaves or other litter should be taken out of the frames, as these harbour insects such as slugs and woodlice. In the absence of a cold frame in which to put the cuttings, make up a bed in the open, but do not leave it later than the first week in September before inserting the cuttings. The Viola is perfectly hardy, and such cuttings will make sturdy

little plants by the next spring; but frame-struck cuttings produce the best plants.

Selection of Varieties.—I will now give a list of twelve varieties for bedding: Mrs. Chichester (white, with purple edge), Moseley Perfection or Meteor (yellow rayless), Dr. McFarlane (purple and black), Mrs. H. Pearce or Swan (white), Agnes Kay (white, with mauve edge), Lady Grant (white, with blue edge), Councillor Watters (dark blue), Bronze Kintore (bronze), Duchess of Fife (light yellow, with heliotrope edge), Mauve Queen (mauve), Cream King or Devonshire Cream (cream), and Louie Granger (rose); and twelve varieties for exhibition: Moseley Perfection (yellow), Geo. Dunn (dark rose, blotched with white), Jenny Houston (purplish plum), Mrs. Chichester (white, with purple edge), Agnes Kay (white, with mauve edge), Kate Cochrane (black and purple), Ellen Smellie (white, with blue edge), Mary Burnie (cream, with heliotrope edge), Mrs. H. Pearce (white rayless), Duke of Argyle (deep plum, with darker streaks), Louie Granger (rose) and Mrs. Hervey (white, with deep purplish edge).

Raising from Seed.—Sow now in a gentle heat, prick off into a cold frame in May and plant out in June. These plants should bloom the following August or September; or, if no artificial heat is available, sow in a cold frame in July or the beginning of August, leave the seedlings in the cold frame until the following spring, and plant out in April. These later-sown plants should bloom in June or July.

WM. BIGGS.

ROSE GARDEN.

CLIMBING ROSES IN POTS.

FAR more reliable results can be obtained by climbing Roses in pots than when the same varieties are cultivated against the wall, or even upon the roofs of houses. Being in pots, they are easily removed to the open for better and more efficient ripening, while in the greenhouse borders, more especially a house of mixed subjects, they naturally remain more or less active, because of the humid treatment necessary for the other occupants.

One of the most essential points of culture among this class of Rose is to secure long rods of growth that can be thoroughly ripened. Recently I saw some really good examples of these, and have seldom seen our favourite yellow, Maréchal Niel, in better form. There is no doubt that this grand old Rose is not grown so extensively as once was the case, when almost every conservatory possessed a plant.

I would like to give a brief outline of how this and other climbers were treated in the case just noticed. The same treatment applies to William Allen Richardson, Mme. Bérard, Belle Lyonnaise,

Climbing Perle des Jardins and Gloire de Dijon. Whether the plants were upon their own roots, or grafted and budded plants lifted from the open ground, the routine was the same.

First of all, they were potted firmly into 9-inch pots, using a rich, loamy compost. This should be done early in the season to allow of the plants standing in a cool pit all through the winter. Before introducing to the house they are cut down to leave only two or three eyes. The rods from these are encouraged in every possible way. As the object is to secure some two or three of extra vigour, even the other shoots which may appear are broken off as soon as discovered. Trained to wires or strings some nine inches to twelve inches away from the glass, each rod is allowed ample light and air, when, with a little attention to tying, they will eventually reach 10 feet to 15 feet.

The growth must be kept clean and healthy from the first, and aided by liberal doses of weak liquid manures as soon as the roots begin to fill the pots. The end of August should see the growths a considerable length, and we may now proceed to assist in the more efficient ripening than can be secured under glass in the ordinary greenhouse. Remove the plants to a warm and sunny position outside, being careful to secure the long growths in some way. The pots should stand on a firm bottom, or the roots will be apt to wander through and the growth be continued longer than is desired. At the same time, they must not be severely checked by withholding water to the extent of distressing the plant in the least. It is preferable to place a few leaves, some litter, or even a board against the pots as a preventive to sun-burning, which would considerably injure the roots. The influence of autumn sun and air will cause a natural ripening of the wood, quite unattainable had the plants remained under cover.

When starting the first batch for flowering, it will be well to give them a double shift, taking great care not to disturb the roots and to have the soil worked firmly and evenly between the ball and the new pot. Rods prepared in this way invariably flower well, and often produce blooms of extra quality when freely fed after the new growths are some six inches long. When the flowering is over, cut down hard once more, and as soon as the remaining eyes begin to push, repot again, this time reducing the soil and roots somewhat, after which confine to the two or three shoots and repeat the routine. With a fair number of plants the flowering season can be prolonged by introducing in successive batches. Some means must be found of keeping severe frost from both the wood and pots when retaining any for late batches. A cool house, late vinery, or shed will answer the purpose.

These notes are likely to be used most for Maréchal Niel; but I may add that I never saw William Allen Richardson and Gloire de Dijon in better form under glass than when grown in this way. A. P.

TREES AND SHRUBS.

THE BLADDER NUT.

(STAPHYLEA COLCHICA.)

STAPHYLEA COLCHICA, popularly known as the Bladder Nut, is a beautiful hardy shrub, producing



THE REDWOOD TREE (SEQUOIA SEMPERVIRENS).

in early summer a profusion of large clusters of snow white flowers. It is by no means a difficult shrub to cultivate, and apparently it is quite at home in any good garden soil; neither does it mind a little shade, to which it is somewhat partial. It is, however, as a forcing shrub that Staphylea is probably best known, and it is a suitable companion in the conservatory to Prunuses, Rhododendrons, and shrubby Spiræas. It is even more handsome when forced, as the flowers are not so liable to be hidden in a mass of greenery as is the case when grown in the shrubbery.

THE CALIFORNIAN REDWOOD.

(SEQUOIA SEMPERVIRENS.)

THERE are no trees on the face of the globe that command greater admiration than the two Sequoias of gigantic proportions that inhabit the coastline of California. Concerning the Mammoth Tree, *S. gigantea*, we have heard from travellers many strange but none the less correct accounts. We have heard of the "Father of the Forest," a great prostrate trunk measuring 435 feet in length and 110 feet in circumference. This monster must have been longer when living, for along the inside of the fallen trunk is a tunnel 35 feet long and in places 8 feet to 10 feet high. We have heard also of the "Mother of the Forest," with 327 feet and a girth of 90 feet to its credit. Yet another curiosity is a big tree which had been purposely thrown, cut off 6 feet above ground, and a pavilion built on the standing stump. Inside the pavilion there is room for a very pretty dancing space, for two sets of lancers or for sixteen couples to spin round with ease. The dancing space measures 30 feet in diameter less 20 inches, the circumference 85 feet.

The Redwood is likewise a gigantic tree, and attains its greatest size on the flats where the soil is moist and the atmosphere misty. Under such conditions it grows to a height of 350 feet, with a diameter of 20 feet. On the slopes its maximum height is 225 feet and its greatest diameter 10 feet. Most of the large Redwoods in California are from 400 to 800 years old, but the trees begin to die down and growth falls off after the age of 500 years has been reached. A very old Redwood has been recorded showing 1,373 annual rings.

There is another side of great interest, and that is the growth of *Sequoia sempervirens* in this country. An idea of its rapid growth in the British Isles may be gathered from the fact that although it was not introduced before 1846, there are numerous trees between 70 feet and 110 feet in height, with girths ranging from 8 feet to 14 feet. Writing on the Redwood in a recent issue of the *Kew Bulletin*, Mr. W. Dallimore says: "If free growth and rapid development were the only qualifications necessary to make this tree a success in British forests, it might be planted without further delay, but it remains to be proved whether the timber will be good enough to warrant extensive plantations. The important place occupied by the species in the lumber trade of America is, however, a sufficient recommendation to warrant it a good trial here."

Apart from the question of its value as timber, it is a tree of great beauty and interest, and one that merits a position in the parks and gardens throughout the country.

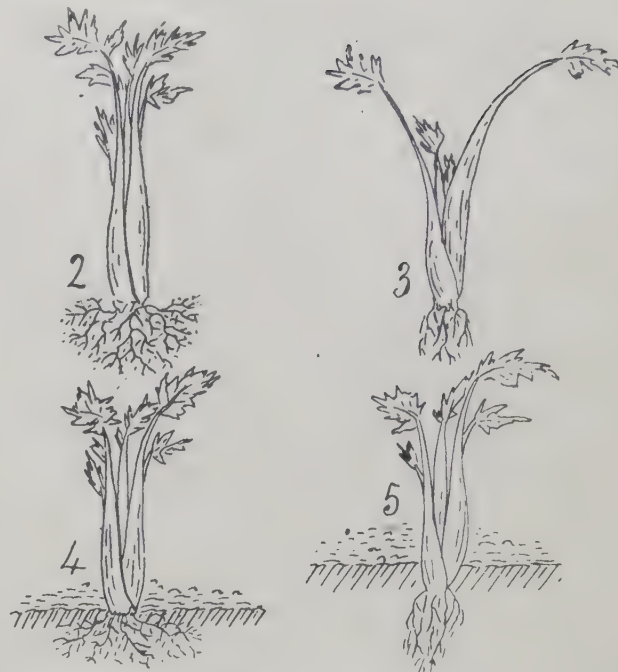
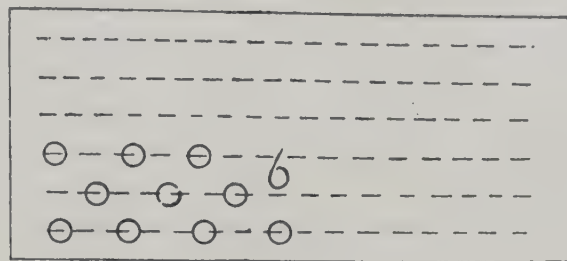
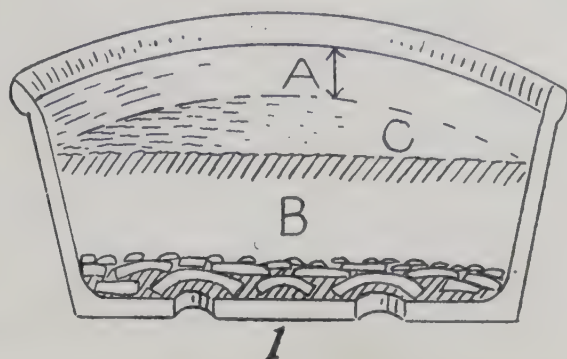
GARDENING FOR BEGINNERS.

HOW TO RAISE AND GROW CELERY PLANTS.

VERY large, luxuriant sticks of Celery may be grown without much difficulty if the plants are put out in a rich soil. Mere size, though, does not count unless the sticks are solid. A good deal of skill is required on the part of the cultivator if he is to succeed in growing really fine Celery plants, and the care necessary must be given right from the sowing of the seeds until the plants which result are ready for the table.

Sowing the Seeds.—These are best sown in a pan, as shown in Fig. 1. The pan must be washed clean and well dried before any soil is put in. First lay a few clean crocks over the holes in the pan, and on the crocks a few half-decayed leaves. Loam and leaf-soil in equal proportions, with a small quantity of well-rotted manure and coarse silver sand, will form a suitable compost. This must be put in as shown at A and B, the level surface C being nicely sprinkled with sand, on which the seeds should be sown. Cover them lightly with sifted soil. The surface of the latter must be $1\frac{1}{2}$ inches below the rim of the pan. A loose square of glass must be put on to conserve moisture. Maintain the soil in an even state of moisture, and keep the pan in a warm position near the glass, but not fully exposed to the direct rays of the sun. Supply moisture when necessary by immersing the pan in a vessel of water.

Transplanting.—Usually, Celery seeds are sown too thickly. Avoid sowing them so; a pinch of seeds scattered on the soil in the pan will be sufficient. When the seedlings are showing their third rough leaf, transplant them 2 inches apart in a similar mixture in boxes 4 inches deep. In this instance, however, some rotted manure or Hop Manure must be placed 1 inch deep in the bottom of each box. Be careful to select the seedlings so that all may be of the same size; this is important. Fig. 2 shows a good seedling and Fig. 3 a bad one. Fig. 4 shows the correct way to transplant and Fig. 5 the wrong way. The plant must not be buried too deeply, and its roots should be spread out evenly. Fig. 6 shows the surface of the soil in the box, and the dotted lines denote the rows of



1.—SOWING CELERY SEEDS AND TRANSPLANTING SEEDLINGS.

seedlings transplanted as shown by the small circles.

A Second Transplanting is advisable, and this time a cool frame must be used, as shown in Figs. 7 and 8 respectively. Fig. 7 shows the front of the frame and Fig. 8 the end elevation. Make up a temporary frame with boards placed on edge for the glass lights to rest on, if an ordinary frame is not available.

Cultivation in the Trenches.—The trenches—very shallow ones—must be prepared early in the season, so that the soil may have sufficient time to settle down, and in the meantime such crops as Lettuces can be grown on the ridges. For a single row of plants the trench should be 15 inches wide at the bottom, and for two rows, as shown in Fig. 9, 18 inches to 20 inches wide. Dig in and thoroughly mix with the soil a liberal quantity of well-rotted manure.

Tying Up the Growing Plants.—A, in Fig. 10, shows the wrong way to tie up the plants; B, the right way. If tied too high up and too tightly,

as shown at A, the young, inner stalks would buckle, as shown at C, Fig. 11. Neat tying keeps the plants compact, and prevents soil lodging in the centres when earthing is done.

Trimming the Plants for the Kitchen.—Fig. 12 shows the wrong way to trim a plant when lifted for use. The nutty heel (Fig. 13) must not be cut off; it is very palatable. Prepare the stick as shown in Fig. 14.

Varieties. — White: Extra Early Market, Matchless and Sandringham; red—Sulham Prize, Major Clarke's Red and Standard-bearer. G. G.

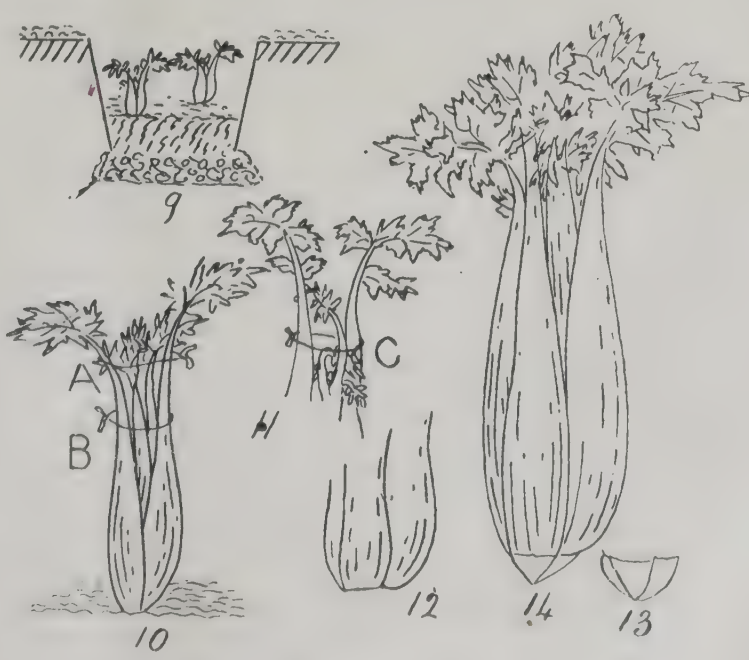
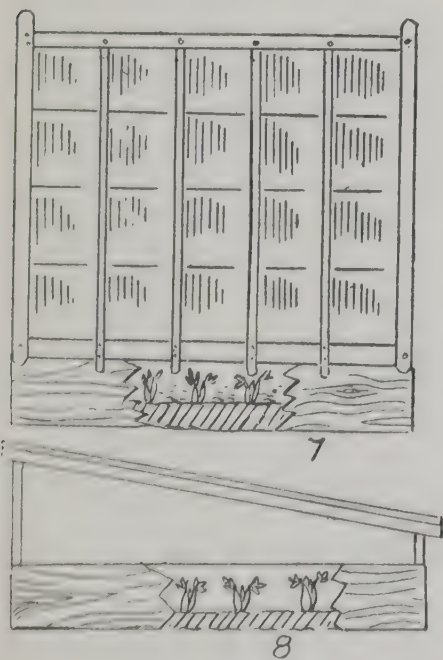
HOW TO PROTECT FRUIT BLOSSOM.

If a crop of fruit fails one year, another must pass before more blossom comes, so that the cultivator works among his trees for a period of two years before any reward is his, if a crop is then secured. So we should do all we can to protect every spray of blossom we can conveniently reach while it is fresh. It should be remembered that it is a very necessary thing to keep the flowers dry; then they often remain uninjured even though subjected to 5° or 6° of frost.

Trees trained to walls may be protected by fixing mats, scrim, herring-nets (double folded), or even Fir branches over them. The mats, &c., should be kept from bruising the flowers, when the wind blows, by the placing of stakes or wires at an angle of 72° against the wall. The Fir branches, which must be flat and spreading, should be nailed to the wall. One branch with a spread of 3 feet will protect 6 feet of wall space below it. The branch, when its stem has been nailed to the wall, must be held in a sloping position by propping it outwards 1 foot from the wall with forked sticks.

Low bush and pyramid trees may be protected by the placing of double-folded herring-nets or light scrim over the tops, fastening the corners and other parts, if necessary, to stout posts driven into the soil so that they are just clear of the outer branches.

SHAMROCK.



2.—CELERY SEEDLINGS IN FRAMES AND PLANTED OUT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Shrubbery.

Privet.—The young growths, if taken now and inserted in a warm frame, will quickly root.

Forsythia suspensa.—This is a charming subject, whether for massing in a bed, isolated specimens in bush form for almost any position, or training to a pergola, house or a pole. When the flowers are past, the necessary pruning should be carried out.

Hollies.—Within the next few weeks the planting of Hollies can be carried out with safety. In transplanting, always take the greatest care of the roots. Endeavour to preserve a good ball of earth, and, if to be removed any distance, make doubly sure by matting up the soil, and do not expose to the air longer than is absolutely necessary. In fine weather spray the plants over with a rosed can and water at the roots. Established specimens will benefit by top-dressings now.

Ericas.—The present month is an ideal time for planting these. A collection of Heaths will provide something of interest at all seasons, and when planted in masses the effect is fine. If the soil is heavy, add plenty of leaf-mould, road sand and peat at the time of planting. A sandy soil with these additions suits their growth admirably, but in a year like the last they suffer badly from drought. A few of the best include *Erica carnea* and the double form, *E. cinerea alba* and *rosea*, *E. mediterranea hybrida*, *E. vagans* and its white variety, *Calluna vulgaris*, the common Ling, and varieties *Hammondii* and *Alportii*.

The Flower Garden.

Sweet Peas.—Those raised from seed sown early in the New Year will soon need planting into their permanent quarters.

Gladioli.—The planting of the bulbs should be carried out without delay. For the mixed border, and also planted in lines where space permits, for cutting purposes, these are indispensable. Bury the bulbs 3 inches or so below the surface of the soil and 1 foot apart. The addition of some road grit and wood-ashes forked into the soil will be found a distinct advantage.

Aster Amellus.—Where cut flowers are in request, a stock of these during the autumn is invaluable planted in lines. Now is a good time to increase them by division. Plant 10 inches to 1 foot apart. Seedlings vary in their time of flowering, and so provide a succession.

Annuals.—When the ground works well, further sowings may be made. Sow thinly and mark the position occupied by the seeds, so that these are not hoed up or otherwise injured by mistake. Those sown in heat and designed for bedding purposes should be pricked off into frames or potted singly as becomes necessary and grown sturdily. Protect thoroughly from cold at nights.

Plants Under Glass.

Streptocarpus.—These plants will now be growing freely in a fairly warm structure, and diluted manure-water will prove of much benefit. The plants will not endure sun, and moisture must not be applied to the foliage, though the plants enjoy damp surroundings. Seedlings sown this year should be put out into boxes of fine soil as soon as large enough. Use plenty of silver sand on the surface.

Chrysanthemums.—By this date the bulk of these should have received their shift into 6-inch pots, and for a time water most carefully. A cold frame will accommodate the plants now, and air on all occasions when favourable should be liberally given them. Those that are intended for large blooms should be treated as advised for obtaining the best results. The decorative varieties, when nicely recovered from their shift, should be stopped again to ensure a bushy habit.

Freelias.—If the bulbs of these are to be retained for another season, no more growth than is absolutely necessary should be cut away. Continue to water until the foliage shows signs of ripening, when the supply should be gradually diminished and the ripening off assisted by all the air and sun that is possible.

Indian Azaleas.—As these pass out of flower, very carefully go over the plants and remove the old blooms. Keep the plants clean by occasional

syringings in bright weather, and before the new growth becomes too far advanced, pot any that may require it. The best soil should consist principally of peat, with a little loam and sand added. Give perfect drainage and pot very hard.

The Hardy Fruit Garden.

Peaches.—The young growths will soon be large enough for disbudding. First remove all those that are badly placed for forming a good-shaped tree. Do not overlook the fact that one growth will be required at the base of last year's wood, and that the leading growth is necessary for extension and to encourage sap into the fruit. A sharp look-out must now be kept for aphids, which, if allowed to go on unchecked, will soon cause crippled foliage. Syringe with an insecticide.

The Vegetable Garden.

Onions.—Those raised in boxes for producing exhibition bulbs must now be gradually accustomed to more air, as towards the end of the month, when the ground is suitable for working, planting is best carried out.

Cabbage.—Make a sowing of a suitable variety for autumn supplies. Sow thinly and transplant as necessary.

Spring Cabbage.—These this year are unusually forward. Remove any decaying foliage from the plants and give a light sprinkling of nitrate of soda while the weather is showery.

Soot.—This is a valuable agent in the kitchen garden especially, and in several ways. Seedlings newly germinated will benefit by light dustings, preferably during showery weather.

Potatoes.—The planting of maincrop varieties should be carried out now as speedily as possible, and in the Southern Counties with comparative safety. I prefer planting the tubers in large drills taken out with the spade. On retentive soils, if a layer of leaves or rotted long manure on which to place the tubers can be afforded, this is a distinct advantage. Avoid overcrowding; give 2 feet to 2 feet 6 inches between the rows and 18 inches between the sets. Select medium-sized tubers for planting, and if necessary to cut large ones in two, this is best done a few days before planting.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Late Grape Vines.—These will start naturally now and need not be subjected to forcing treatment. Not much fire-heat, little moisture and early ventilation are the chief points to be observed.

Planting Vines.—This is the proper time to plant cut-backs, the buds being at the point of breaking. If on turning out the balls any are deficient in roots, reject them, and plant those only which have an abundant root system. Break up the ball and spread out the roots on the border, covering them with 4 inches to 6 inches of soil. Keep the houses close and moist, and the Vines shaded from sun, till established.

Tomatoes.—Seeds may now be sown to produce plants to furnish pits which would otherwise remain untenanted during summer. The earliest batch should be ripening; but ours this year have failed, and fruit will not be had till the winter-sown batch is ready. It is a safe plan with Tomatoes to apply water very sparingly till part of the crop is set, and to limit atmospheric humidity at all stages of growth, ventilating as freely as the weather will permit. Rub off all side growths as soon as they appear.

Strawberries.—We usually do not have fruit of much merit till this time onwards. The plants must be very carefully ventilated, and a sharp look-out kept for the earliest appearance of mildew. The ripe and ripening fruit may be preserved considerably longer by shading it from the sun than if unshaded. Later batches need thinning. Give manure-water as required and attention generally as above.

The Vegetable Garden.

Globe Artichokes.—Young stools may now be planted in rows 4 feet apart and 5 feet or 6 feet between the rows.

Cauliflowers.—Autumn-sown plants may now be planted in the open quarters, lifting them with balls of soil and planting very carefully with a trowel. Water may be required once or twice to start them, but only in fine weather.

Mushrooms.—In fine weather admit air to sweeten the atmosphere, and dispense with fire-heat as much as possible. Beds that have been long producing may be benefited by a slight application of superphosphate of lime dissolved in water. Nitrates are supposed to cool the beds. An occasional sprinkling of fine soil over the surface of the beds has an invigorating effect, but, as a rule, new beds give the best results.

Lettuces.—Those raised under glass some time ago are now large enough to transplant. Choose for this batch a warm, sheltered position and pulverise the soil very thoroughly. Try to secure a small ball of soil with each, planting them rather deeply and watering in if the ground inclines to dryness.

Radishes.—Sow often. Earlier sowings have been sown among Carrots and Seakale, but it is now better to keep them separate. No method is better than that of making a small hole for each seed; it takes a little more time to sow them, but a small quantity suffices, and it is certainly worth the trouble.

The Plant-Houses.

Orchids.—This is a suitable time to resurface with sphagnum, and to repot *Cymbidiums* and *Cypripediums* generally.

India-Rubber Plants.—Clean, healthy tops of the common and variegated, if ringed, and a 4-inch pot placed to each with suitable soil, soon emit roots in a hot-house, and should be repotted shortly into 6-inch pots. The last-named requires a high temperature to bring out the variegation.

Strelitzia Reginae.—This strange-looking but handsome plant, if grown in a warm structure, will now be coming into flower, and will require more water at the root; but at no time should it be over-watered. It succeeds in the greenhouse, but does not flower till later in the year. To increase it, divide the plants when growth recommences, saving as many of the fleshy roots as possible. It requires large pots for the size of the plants to do it well.

Tree Ferns.—These are on the move, and it cannot be too well known that to succeed they must be kept very moist, the stems as well as the roots. Some growers swathe the stems in sphagnum moss, but this is not essential where it would prove an eyesore, wetting the stems two or three times a day meeting their requirements. Any requiring repotting or new tubs should be seen to at once, but they can be grown in the same receptacle for many years without shifting.

The Flower Garden.

Phloxes.—Scarce varieties may be increased at this time from selected pieces of the roots.

Forced Narcissi.—These may be usefully employed to brighten dull parts of the grounds, planting them either as they have been grown in clumps, or singly. If the latter method, let the soil be somewhat dry, when it will be easier to free from the roots without breaking them.

Hollies.—If any of these are to be transplanted, they should be watched so that they may be caught just before the buds break, and transplanted at that stage. Provided the roots are all right, the plants will take hold at once. If the soil is dry, soak with water after planting, and next day cover the wet soil with dry earth.

Roses.—Hybrid Perpetuals, Hybrid Teas and others of the tender sections may now be pruned. The several varieties must be studied as to habit, some requiring very hard pruning, while others may be allowed to grow into bushes. One thing is important for all—to cut out all weak growths and all old growths which are palpably exhausted. Those which have become weak from age may be rejuvenated by cutting close down. A keen frost sometimes shows one the value of hard pruning. Should recently-planted Roses be hard pruned? is not so easily answered. Two beds of Fellenberg planted last November are breaking so strongly that I shall not prune them at all, and expect to obtain plenty of bloom as a reward of forbearance.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

DAFFODIL NOTES.

GOOD FLOWERS AT VINCENT SQUARE,
MARCH 19.

ASI hinted in last week's notes, the present article will mainly deal with the "top spit" of the older varieties exhibited on this particular occasion, together with two or three quite new things which the inelastic columns of *THE GARDEN* precluded mention of before. A group from Mr. A. M. Wilson of Bridgwater has come to be synonymous in the last year or two with a group of novelties and "top spits," and were they hats, I should say they invariably look as if they had just "come out of the band-box." The sea air of Cornwall and Somersetshire acts like a "hot iron" and gives them a polish and a colour which more Midland and Northern growers sigh for in vain.

Take, as an example, Bernardino. It is an exquisitely lovely flower wherever it is grown, but there is a vast difference in the depth of tone between one grown at Whitewell and one at Llanarth. I see from Mr. Wilson's list its retail price is to be £2 for the present season. Although it is so expensive, I have no hesitation in advising a purchase. It has a grand constitution. It is a rapid increaser. It looks important in a garden. It is so *chic* and charming in a room. The widely-expanded ruddy apricot cup and the broadly-segmented white perianth here enter into such perfect combination that something very beautiful indeed is the result. Buttercup, the rich deep yellow Campenelle hybrid, is another plant of the same "all round" class. It is very robust, very free, very offsetty, very sweet and very nice in a vase. It has a good deal of the look of its Jonquil parent in its composition, and is certainly one of the most distinct Daffodils ever raised.

With these I couple The Fawn, one of the very best of the giant Leedsis. It is the outcome of a cross between Minnie Hume and Weardale Perfection, and "it has inherited the substance of the latter." Its measurements are: Diameter of perianth, 4 inches; cup, 1½ inches long by seven-eighths of an inch wide. Its distinguishing features are its great substance and its rather narrow, much-crinkled pale citron cup. It is of the first water as a garden plant. Another exquisite flower is Ivoryne (perianth, 3 inches; eye, 1½ inches in diameter). The perianth is pure white, with broad, overlapping segments, and, as may be gathered from the measurements, the eye is large, very flat and of the palest lemon, tending towards a faint green in the centre. It is an ideal bloom for a show. A favourite of mine that I was glad to see again was Beryl. Its perianth, which is of a pleasing shade of soft yellow, reflexes like that of a Cyclamen. This harmonises well with the small bead-like cup of dusky orange. It is a distinct and refined flower. Its parents are cyclamineus and a Poet. Whelp attracted some attention. It is a large flat flower (perianth, 3½ inches; eye, seven-eighths of an inch), a sort of flattened and glorified Eyebright. Its white perianth is good for such an early flower.

Messrs. Barr and Sons exhibited a good many fine things. Michael, to begin with, is a host in itself. As trumpets go it is not over-large (perianth, 3½ inches; trumpet, 1½ inches long by 1½ inches at brim). It is a real rich Guernsey butter yellow self, with a broadly-segmented campanulate perianth and a regular, rather short trumpet,

well turned over at the top. Its value is given to it by the thick, rich-looking, smooth, even texture of the whole flower. There was a splendid bunch of Lord Kitchener (perianth, 3½ inches), one of the famous giant Leedsis of Mrs. Backhouse. It has a well-proportioned pale citron cup and a flat, overlapping right-angled perianth. Mr. P. R. Barr told me himself he had never seen better specimens. Venus is another of the same class raised by Mr. W. F. M. Copeland. It is a refined, well-proportioned flower, which goes almost white with age. The good opinion that I formed of it last year will be fully confirmed before the season is over. It is worth getting as a show bloom. As an uncommon bit of dainty colouring, the delicately-shaded prawn red cup of Corallina was very noticeable. I did not measure Bedouin, but it did not appear to be as large as it usually is. This is always a striking flower, with its large orange red cup. It might be described as a Crown Prince come to man's estate. A flower that is not new, but which I do not remember seeing before, was Queen of the North (perianth, 3½ inches; cup, three-eighths of an inch deep and five-eighths of an inch wide). It has a rounder look than the well-known White Lady, and its segments are broader and more overlapping; otherwise it is very much of that type and certainly one of the very best of them. One hardly need describe Sunrise. If the pale orange rays on the perianth offend the strict arbitrary eye of the florist, they fascinate those of the people who like charming flowers. Few Daffodils command more general admiration. The deep orange, shallow-shaped cup with its red ornamentation on the margin has just the setting to suit it in the white, palest orange-rayed perianth. Sunbeam and Mohican both have a great family likeness to it, and no wonder, for all three had their beginning in the same seed-pod. The former is a smaller flower with a decided primrose perianth, while the latter is of a looser build and holds a somewhat similar position to Sunrise that Sirius does to Lucifer. Of the two, Sunbeam is my favourite. The majestic Ajax, Cleopatra, stood out well. It is a real showman's flower, of a softer yellow shade than either Monarch or Lord Roberts, and it is larger. Neither of these last-named varieties does really well with me, so I am looking forward with considerable interest to the behaviour of the Egyptian Queen. As a garden plant to give a bright bit of red colour early in the season I would recommend a trial of Firelight. It must be grown in a clump to be seen at its best; then its red and yellow flowers among its blue-green foliage are very attractive.

Robert Sydenham, Limited, had only a small lot, but I thought Nellie Price, which was a recent purchase from the Poet-maker, a very charming little bloom with an Almira look in the perianth and a pale green eye. Green-eyed beauties are quite the rage among the Poets now. Messrs. Bath had a few of their own trumpet seedlings and a nice vase or two of that beautifully-formed Rising Sun, which is one of the most shapely of the yellow trumpets. I hope the great god size will not cause an eclipse. Never mind, it will not be for always, if it does. Princess Ena (perianth, 3½ inches; trumpet, 1½ inches by 1½ inches) looked well. It is a pale bicolor with a long trumpet, which widens out and recurves at the top. The measurements do not give quite a proper idea of the flower. In my own mind I compare it with the better-known Dorothy Kingsmill.

I have left Mr. Bourne's collection till the last. He had among his newer things two vases of

Whitewell. This year it comes small and not up to its usual standard. It is a bloom in the way of Princess Mary, with a creamy white perianth and a large, much-expanded deep yellow or orange cup. Both as a garden and a show plant it is fine. Olympia, which I referred to a fortnight since, is a huge yellow Ajax, with a deeper shade of yellow in the trumpet than in its perianth. It is a magnificent plant for pots. White Sergeant has a greeny white, slightly campanulate perianth, with a graceful-looking trumpet of a pale primrose shade, recurved at the brim (perianth, 3½ inches; trumpet, 1½ inches long by 1½ inches wide). Omar Khayyam is one of the many new Poets which, I fear, are getting rather bewildering in their likenesses and their numbers. It is a good flower with a star-shaped, overlapping perianth of much substance and a nice distinct-looking eye. It is obviously a good plant for pots, in that it has that great desideratum of not "quartering" till past middle age, even if it does then.

JOSEPH JACOB.

THE HISTORY OF PRIMULA OBCONICA.

IN the current issue of the Journal of Genetics an intensely interesting article is contributed by Mr. A. W. Hill, M.A., on the development of *Primula obconica* under cultivation. The history is traced from the finding of the wild plant in China by Maries in 1879. The flowers of the wilding were pale lilac, with a yellow eye, and Mr. Hill carefully traces the development from that time up to the present year. The first white flowers were recorded in 1886, and the dark eye, together with the increase in size of the flowers, was observed in the year following. M. Lille introduced the grandiflora variety in 1892, and fimbriation was first recorded by Mr. J. Crook in 1893. Double flowers were first put on the market in 1901. Herr Arends in 1904 created a mild sensation with his strain, to which he gave the name *P. obconica gigantea* syn. *P. Arendsii*, a supposed hybrid between *P. obconica* and *P. megaseæfolia*. The blue form, *P. o. cærulea*, was raised by M. Ferard in 1907, and Chenies Excelsior, an alleged hybrid with *P. japonica*, was shown in April, 1911. The article is accompanied by a series of illustrations in colour, showing the various stages of transition. In his concluding remarks, Mr. Hill says: "The evidence which has been adduced in support of theories of hybridisation with other species is not sufficiently confirmed by facts to justify its acceptance." Whether this be the case or not, we are certainly acquainted with at least one plant that was intermediate between *P. obconica* and *P. megaseæfolia*, but as it was no improvement on either alleged parent, it was eventually discarded. There is one point about which we are sure, although it is quite overlooked, viz., to obtain a full yield of fertile seed of *P. obconica*, pollen from the short-styled (thrum-eyed) flower should be transferred to the stigma of the long-styled (pin-eyed) flower, and *vice versa*. As a point of practical importance it might be mentioned that where hand pollination is carried out for the purpose of procuring seed, it is quicker and easier to pollinate pin-eyed flowers from those having protruding anthers, as by this method there is no need to split down the corolla tube for the operation.

One very singular point in the supposed hybridisation of *P. obconica* is that this species is invariably the female parent, and that reciprocal

crosses give no result. It is doubtless with this thought in mind that Mr. Hill sums up with the remark: "In view, however, of certain doubtful points and of some interesting questions as to the influence of foreign pollen in effecting fertilisation, it would seem desirable to suspend full judgment until the results of further careful experiments in the fertilisation of *P. obconica* with foreign pollen have been obtained."

THE ANNUAL SCABIOUS.

AMONG annual flowers, the old-fashioned Scabious still holds an honourable position, and in Northern gardens at least it is regarded as one of the best flowers for garden embellishment and for cutting. The flowers depicted on the coloured cover of this issue represent a modern strain of the annual Scabious, a strain that owes its existence to the efforts of Messrs. Dobbie and Co. of Edinburgh. The flowers are large and full, and the strain embraces many beautiful and unique colours. The cultivation of these plants is very simple indeed. To get an extra early display, seeds are sown in February or early in March under glass; but for all ordinary purposes they may be sown in the open garden during the next week or two. Bees are particularly fond of Scabious, and where the former are kept, these flowers should be grown.

ANSWERS TO CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SCHIZOSTYLIS NOT FLOWERING (C. G.).—It is usual for *Schizostylis coccinea* to flower during the late autumn. Can it be possible that your plants have done so, and that you have missed seeing the flowers? We advise you to place a few plants in a border with rich loamy soil at the foot of a warm wall, with a southern exposure for preference, and keep them well watered during summer. It is possible, if you do this, that flowers will appear next autumn. Your climate ought to suit the plant exactly. We advise that your healthy clump be left in its present position; but be careful to supply it with plenty of water while growth is active.

TAKING CUTTINGS OF ALYSSUM (C. J.).—The shoots of the Alyssum which have grown in the frame will make the best of cuttings. A fairly light soil, such as equal parts of loam and leaf-mould, with about half a part of sand, will make a very suitable compost. Some of it should be passed through a sieve with a quarter of an inch mesh, laying the rough portion on one side. They will do very well in boxes if these are prepared by putting a layer of broken crocks in the bottom, and over it some of the rough soil that did not pass through the sieve. Over this place the fine soil, made level, and press down moderately firm; then dibble the cuttings therein, and settle all in its place with a watering through a fine rose. A very gentle hot-bed will suit them; but if there is too much heat and moisture they are liable to damp off wholesale. Perhaps your warm house will suit them best, especially if a square or two of glass is laid over them to prevent too rapid evaporation. They must, of course, be kept shaded.

DAFFODIL CULTURE (C. W. G.).—You appear to have, so far as the Daffodil is concerned, an almost ideal soil, provided always that its moisture-retaining properties are not calculated to render it close and sticky. The Daffodil being the most important crop, you might proceed with the work of trenching and preparing the ground at once, heavily manuring the land at the same time.

With this done, you might with safety plant the land in August or September next without having previously cropped it, since there is nothing more loved by the Daffodil than a maiden soil of the richness you suggest. Should this meet your requirements, the top spit could be trenched in, to the ultimate benefit of the whole plot and the crops. If, however, you are not prepared to plant in August next, and would prefer to wait another year, you will have to ascertain if your soil is free of wireworm before attempting to crop it with kitchen garden produce. For example, if wireworm abounded in the soil, many crops would be ruined by the pest, and we know of no soil fumigant capable of inflicting a death-blow on this particular pest. Gas-lime is good, but it is obnoxious near dwellings, and, moreover, the land would have to lie fallow for some weeks at least. If, therefore, the pest is present and numerous, the top spit, cut 5 inches or 6 inches deep, should be removed and stacked; or by half burning it, making a fire with wood and small coal, the pest would be destroyed, the soil enriched by the burning, and the land benefited everlastingly by additional drainage and aeration. Hence you will see that what is the right thing to do depends upon circumstances, and these would be best determined on the spot. It may be distinctly pointed out, however, that the Daffodil is not affected by wireworm. If the information here given does not meet the case, you had better get the advice of a specialist, whose fee is often saved a dozen times over by knowledge gained on the spot. Bound volumes of *THE GARDEN* are obtainable from the Publisher, the price of which is 7s. 6d.

TREES AND SHRUBS.

PRUNING COMMON AND PORTUGAL LAURELS (Mrs. H. J. C.).—You cannot do better than prune your Laurels during April, for if the work is done at that time new shoots are soon formed to hide the cuts and furnish the bushes again. If pruning is done in autumn, the plants look ugly for many months, and break again less freely than when pruning is delayed until spring. You may cut the plants well back, especially in the case of the common Laurel, for new shoots will be formed from dormant buds on quite old branches. Should you, however, simply wish to reduce the plants a little, draw out the longer shoots, taking care to cut them back to a side branch. This will leave the bushes without any appearance of stiffness.

SHRUB FOR NAME AND TREATMENT (M. C. S.).—The specimen sent is *Prunus triloba*, a member of the Plum family. It is largely employed for forcing, as, apart from the members that are grown in this country, immense numbers are sent here from Belgium and Holland during the autumn months. The reason of your plant not flowering is undoubtedly starvation; therefore we should advise you to shift it into a 7-inch pot at once, using good loamy soil. Then, when the cold weather of spring is over, plunge it out of doors in an open sunny spot, taking care that it is regularly supplied with water. As the pot gets full of roots, an occasional dose of liquid manure will be helpful. This *Prunus* also makes a delightful wall shrub, and in this way it will mount up to a height of 10 feet or 12 feet and flower profusely.

AUCUBA SEED NOT GERMINATING (J. R. N.).—Providing the seeds of *Aucuba japonica* are perfect and fully matured in every way, there ought to be no difficulty in raising plants from them, supposing they are sown when ripe, say, in February or March, in light, well-drained, loamy soil, either out of doors or in pots. It may be, however, that your fruits have swollen to the normal size without the flowers ever having been properly pollinated; therefore the seeds may not be fertile. This may be noticed in many kinds of fruits and seeds. If you place pollen on the stigmas of the female flowers with a camel-hair brush, or by some other agency, you ought to secure fertile seeds. Should you only wish to increase your stock of *Aucubas*, it may be easily done by layering the lower branches, or by cuttings taken off during spring or summer and placed in sandy soil in a close frame until rooted.

A NEGLECTED SHRUBBERY (C. B. B.).—We are afraid that you will not find it a very satisfactory matter to top-dress the ground you speak about with artificial manure, for the roots of the stronger-growing trees will take the nutriment which you wish to go to the shrubs. You might, however, try a light dressing of guano about established shrubs, but not about those which are newly planted. Failing guano, you might try bone-meal. A better plan would be to take the shrubbery in sections, clear out all the rubbishy plants, trench the ground, cut out roots, where such a thing will not seriously interfere with the health of the trees, add a proportion of better soil to the ground, and plant again with shrubs suitable for the position. This creates more work in the first place, but the results will be far and away more satisfactory than treating the ground as you suggest. If you can obtain good soil to add to the ground, use it in preference to manure. In the event of having to fall back on manure, however, only use that which is thoroughly rotted, and take care that it does not come in contact with the roots of newly-planted shrubs.

SPREADING PLANTS FOR A GRASSY SLOPE (C. E. M. L.).—The following plants are likely to succeed under the conditions you describe: *Vinca minor*, *Cotoneaster microphylla*, *C. horizontalis*, *Juniperus Sabina* variety *prostrata*, *Hypericum calycinum*, *Santolina Chamaecyparissus*, *Helianthemum* in variety, French Gorse (*Ulex Gallii*), and dwarf Lavender. You could make the bank very effective by planting it entirely with different varieties of Rock Rose or *Helianthemum*, or with a mixture of *Helianthemum* and *Cistus*. The following kinds would

be a good selection: *Helianthemum vulgare* vars. *Fireball*, *Magenta Queen*, *alba*, *croceum*, *cupreum*, *mutabilis*, *rhodanthum*, *roseum* and *venustum*, *H. formosum* and *H. polifolium*; *Cistus corbariensis*, *C. florentinus*, *C. lusitanicus* and *C. monspeliensis*. All these would need to be obtained in pots. No special preparation of the ground would be required, for they thrive in poor, dry soil, spreading rapidly enough to soon cover a considerable area. If you prefer a mixture of subjects, be careful to plant each kind in an irregular-shaped mass, so that no suspicion of formality will be noticed when finished.

KITCHEN GARDEN.

HOW TO PLANT WATERCRESS (C. B.).—Instead of sowing seeds you would be well advised to buy a few bunches of Watercress and insert the shoots in the form of cuttings. Usually there are young roots commencing to grow from the stems of the cut Watercress, and so propagation is easily effected. You do not say where you wish to grow the plants. If in a stream, the cuttings must be inserted in some good loam placed just at the edge of the running water, so that it will be constantly soaked through. In due time the plants will spread very freely, covering both sides of the stream; and if the latter be shallow, about four inches deep, with a gravelly bottom, the plants will grow in the water itself. If you intend to grow the plants in borders, propagate cuttings early in September, inserting them fairly close together in sand in pans, and maintain the sand in a very wet state. In the meantime make a broad trench nearly one foot deep in a cool, shady border mix some sand and rotted manure with the ordinary soil, and water to make a puddle; then cover the surface with coarse sand, 3 inches deep, put in the rooted cuttings, and keep the soil always very moist.

TIMES TO SOW VEGETABLE SEEDS (A. S.).—Peas.—Sow *Excelsior* at once and *Bountiful* and *Centenary* a fortnight later. On May 1 sow *Imperial Defiance*, and *Abundance* a fortnight later, say, the 15th, reserving *Royal Jubilee* for the last sowing at the end of the first week in June. The Peas sown on and after April 19 should be sown in manured trenches like Celery. They will then withstand drought and mildew in hot weather, and give much heavier crops. The rows should be planted 4 yards apart. They do much better in this way than when planted closer together. The ground between can be cropped with other low-growing vegetables. Sow seeds of all vegetables thinly. Broad Beans and Brussels Sprouts sow now. Celery.—Sow now in fine soil in a box under a glass frame. Cucumber.—Sow now in frame or hot-bed. Leek.—Sow now and replant later. Lettuce.—Both Cos and Cabbage sow now and every three weeks for succession until the end of July. For autumn and winter supply sow on August 12. Carrots.—Sow in warm border now; larger sorts a fortnight later. Cauli flowers.—Sow at once and every three weeks until the middle of July. Sow again on August 16. Protect these plants in frames to plant out in spring. Broccoli.—Sow *Michaelmas White* Protecting, *Early White* and *Snow's Winter White* now, also *Prefecture*, *Purple Sprouting* and the other late ones. Spinach.—Sow now and every three weeks until the middle of July. On August 16 a large sowing should be made for autumn and winter supply. Tomatoes.—Sow now in pots under glass and plant out of doors at the end of May or the first week in June, according to the weather. Turnips.—Sow a few seeds on a warm border at once, and then at intervals of three weeks until the end of July. On August 12 sow a large breadth for autumn and winter supply. Savoys, Kale and winter greens.—Sow now. French Beans.—Sow the first crop on a warm border at the end of April, and successional every three weeks until the middle of June. Scarlet Runners.—Sow the first week in May in manured trenches as for Celery. Beetroot.—Sow May 1. Mustard and Cress.—Sow now in a warm border, and for succession every week throughout the summer. Endive.—Sow now for an early supply and at the end of April for an autumn and winter supply. Vegetable Marrow.—Sow in pots in a frame now, and plant out of doors the end of May (according to weather). Parsnips.—Sow these as soon as possible. Radish.—Sow now in rich soil and every fortnight afterwards during summer. For autumn and winter supply sow August 16. Onions.—Sow now.

THE GREENHOUSE.

AZALEA BUDS DROPPING (B. M. B.).—There are several items which may cause the buds of *Azalea mollis* to drop just before they open. In the first place, this is very likely to happen if the plants are potted up only just before they are taken into the greenhouse; next, they may have been allowed to get too dry (perhaps before they were potted), or kept too saturated. An excess of atmospheric moisture collecting at the base of the bud would also cause the flower-stems to decay. With careful attention *Azalea mollis* may be forced two years running, though it is generally preferred to force the plants only in alternate years. When forced annually it is most essential that they be well cared for after flowering; that is to say when the blossoms are past, the plants must be kept under glass and be well supplied with water. As the leaves produced under such conditions are tender, the plants must not be stood out of doors till the cold weather is quite past. An occasional dose of liquid manure when they are making their growth is very beneficial to these *Azaleas*. During the summer they should be stood out of doors in a spot fully exposed to sun and air, in order to set their buds for another season. It is very necessary that they be kept well supplied with water at all times but especially during the spring and summer.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices : 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

The White Hollow-Rooted Fumitory.—The white variety of *Corydalis cava* is highly pleasing in the garden at the present time, and in no part is it more beautiful than on a flat place on the top of a low retaining wall supporting a bank of soil and in partial shade. It is about five feet above the ground-level, this height showing the pretty white flowers much better than when on the flat. It will not, however, do on the top of an ordinary wall unless it has a few inches of soil.

Trial of Violas at Wisley.—The President and Council of the Royal Horticultural Society have arranged for a trial of Violas to be conducted at the Wisley Gardens during the season of 1912. It is hoped that a large number of varieties will be sent to the Superintendent, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey, for this purpose, so that the trial of so important and popular a flower may be made as useful as possible. Six plants of each variety should be sent at once.

Primula viscosa Hybrids.—One of the most interesting exhibits at the Royal Horticultural Society's exhibition held on the 2nd inst. was a small group of hybrids of *Primula viscosa*. These were shown by Miss Willmott of Warley Place, Brentwood, Essex. There was a great deal of variation in the colour and form of the flowers, as well as in the habits of the plants, ranging from the type to almost garden Auriculas. One plant with large trusses of well-developed flowers of a pale rose lilac hue was particularly attractive, and was, apparently, the result of a cross between a garden Auricula and *Primula viscosa*. Evidently the hybridisation of many of our hardy flowers is as yet in its infancy, and it is well within the bounds of possibility that even more beautiful and interesting results will be obtained with Primulas and other plants in the near future.

The Best Potatoes.—The joint report of field experiments in Staffordshire and Shropshire and at the Harper Adams Agricultural College, Newport, Salop, for 1911, just published, contains some interesting particulars of trials of varieties of Potatoes. These trials were conducted in a field of sandy soil, sprouted sets being used. The land was manured with farmyard manure, eight tons per acre, presumably ploughed in during the autumn, supplemented by 3cwt. of superphosphate, 3cwt. of kainit and half a hundredweight of nitrate of soda, these being applied at the time of planting on April 25. Not less than a quarter of a square rod of each variety was grown. Owing to the drought, all the crops were light; but we name in order of merit the four that gave the heaviest total crop in each section. Early : Duke of York, Midlothian Early, Harbinger and Sharpe's Victor.

Second early : Russet Queen, Radium, Aberlady Early and Colleen. Maincrop : Eastern Planet, Goldfinder, Provost and White City. An experiment was also conducted to compare the value of winter applications of farmyard manure with manuring in the drills at the time of planting, the result being in favour of autumn manuring.

A Rock Garden Rhododendron.—A dainty little Chinese species eminently fitted for the rock garden is *Rhododendron intricatum*. When quite small the plants flower freely, being nicely covered with small, compact trusses of the lavender blue blossoms. These are not more than half an inch across. Mr. E. H. Wilson describes the plant in a wild state as a low, densely-branched evergreen species 1 foot to 3 feet in height. Cuttings root readily in a slightly-heated propagating-frame in August.

The Weeping Japanese Cherry.—This interesting and distinct Cherry flowers in March about the same time as the Almonds. Owing to its weeping habit, the plants are seen to the best advantage when grafted on stems 6 feet or more in height. For sheltered sunny borders and the formal garden this Cherry is seen to great advantage. The specimen which suggested this note is some six feet high, with quite a formal flat top, all the branches being at first horizontal, then quite pendulous. Every twig about the middle of March was laden with the delicate rose-tinted blossoms. The tree is appropriately named *Prunus pendula*.

Stag's-Horn Ferns at Glasgow.—There is an unusually good collection of Stag's-horn Ferns in the Botanic Gardens, Glasgow. Mr. James Whitton, the curator, has a liking for plants of this class, as he has, indeed, for plants of almost any kind. The popular *P. Aleicorne*, the common Elk's-horn Fern, is well done; but *P. grande* is the great favourite with those who see the collection.

The Double-Flowered Blackthorn.—This is a shrub which is rarely planted, yet it has much in its favour, for it is certainly one of the most showy of the dwarfed Plums. Of dense habit, it may be grown as a bush 5 feet or 6 feet high, or it may be grafted on a Plum stock 5 feet or 6 feet in height, and so form a small bushy-headed tree. In either case it develops a thicket of rather stunted, somewhat spiny branches after the manner of the type, and the double white flowers are borne with the greatest freedom about the end of March and the early part of April. Although quite showy enough to grow as a specimen bush, it is an excellent shrub to use for a group in the wild garden, its usefulness for this purpose being added to by the fact that it is not very fastidious regarding soil, although that of a loamy character suits it best. As a companion to the double-flowered Gorse it would be excellent for clothing dry banks.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Rose-Coloured Pasque-flower.—I was surprised that this distinct and charming form of the Pasque-flower alluded to in THE GARDEN for March 30, page 153, as having been exhibited at the meeting of the Royal Horticultural Society on March 19 did not gain an award of merit, especially as the floral committee bestowed awards with a rather lavish hand on that day. At all events, there is, I should say, not much doubt that, should it be again exhibited, it will gain the honour of an award, as it is so distinct from the type and of such a pleasing shade of colour.—H. P.

Carmichaelia australis in South-West Scotland.—This handsome plant thrives well in the mild South-West of Scotland, and a very large specimen is to be seen in one of the prettiest of the Kirkcudbrightshire gardens. It has been in its present position in the rock garden for a number of years, and never fails to flower with great freedom and to increase in size annually. The garden in which it is cultivated is quite near the Solway, and the influence of the Gulf Stream, a part of which is said to enter that frith, is highly beneficial to many reputedly tender shrubs and other plants. Its handsome lilac flowers, borne here in the greatest plenty, are admirable when the plant thrives as it does in this favoured South of Scotland garden.—R. A.

Saintpaulia ionantha.—I think this little plant is not so popular as it was soon after its introduction. If I am correct, it is unfortunate that there should be any falling off in the favour with which it was received. It is so easily raised from seeds, treated in the same way as those of the Begonia and sown in March, that no one who has a stove need be without this charming Saintpaulia. Its flowers are almost like those of the Violet in general effect, although the plant is one of the Gesnerads, of a genus of which it is the sole member. It requires stove treatment, and can be had in bloom all the winter; in fact, practically almost all the year. It is now varied in its coloration, but the prevailing tints are of a deep blue and purple blue. The white variety is very pretty, and there is also a rose-coloured one seldom met with.—A. M. D.

A Dwarf Azalea.—Azalea Hexe, a pretty, small-growing form of the Indian Azalea, furnishes a good illustration of the fact that a plant may remain more or less in a state of comparative obscurity for years, and then rapidly bound into popularity. It was raised over thirty years ago by the late Mr. Otto Forster, and resulted from crossing the then well-known variety of Indian Azalea, Duc de Nassau, with pollen from a good form of Azalea amoena. After it got into cultivation I often saw this variety grafted on to stems about a foot high, a practice generally followed by the Belgian cultivators with Indian Azaleas. In this way A. Hexe attracted no special attention until it struck someone to grow it as dwarf, bushy plants on its own roots, and, so grown in comparatively small pots, it caught on. Now it is extensively cultivated and meets with a ready sale. The flowers, which have the hose-in-hose character common to the best forms of Azalea amoena, but are larger than those of that well-known kind, are of a bright crimson-carmine

colour. It can be readily struck from cuttings, and the plants that one may now frequently see in the florists' shops are obtained in this way.—G. R. M.

The London Daffodil Show.—I am wondering whence, in any case Southwards, are to come the flowers for competition in the Royal Horticultural Society's exhibition so late as the third week in April, when the great mass of the varieties have been at their best during the last week in March, just three weeks earlier. Most certainly all varieties have been abnormally early this year, due, no doubt, to two causes—exceptionally hard ripening or maturing of the bulbs last summer, and a very prolonged open growing autumn allied to a relatively mild winter. Unless there will be plenty of flowers in the North so late as the 16th, it is difficult to see whence flowers in the many classes will come. Daffodils cannot well be kept back once in bloom. That the show seems to be far too late for the season cannot be blamed on anyone, as the selection of the date was made by the Daffodil committee, which includes all the experts, who, of course, should know, and who were guided by previous experience.—A. D.

Another Rare Indian Lily.—In the issue of THE GARDEN for March 30, page 158, there is an illustration of Liliun roseum, a strange and uncommon Lily from the Himalayas; and quite recently, in a notice of L. neilgherrense, the writer referred to its extreme scarcity at the present day compared with a generation ago. There is, moreover, another Lily, native of the same region, of which in the eighties I used to receive a few bulbs from two or three correspondents, but which now seems to be almost, if not quite, unknown. I allude to L. polyphyllum, which is singular in being the only Indian member of the Martagon group. The bulbs are long and narrow, a good deal after the manner of the Siberian L. tenuifolium, but even longer in proportion to their width. The flower-stems reach a height of about a couple of feet. The flower segments are less reflexed than in most of the Martagons, but, still, the blossoms are very beautiful and distinct. They are of a yellowish cream tint, marked inside with short purple lines. I could only grow it under greenhouse treatment, and then very few of the bulbs flowered a second time.—J. P.

Colour-Schemes for Flower-Beds.—May I point out to "A. D.," whose note appears on page 154, March 30, that the Canterbury Bell and Sweet William combination, described on page 130, March 16, was put forward because of its unique effect rather than as an arrangement that would extend throughout the summer. Also that we do grow successional (or rotation) plants to follow the shorter-lived flowering plants. We usually follow with Antirrhinums, Asters, dwarf Nasturtiums and similar plants; but I did not trouble to mention this in the note referred to, as my object was to elicit from other readers any really good arrangement out of the general order of bedding or planting. Two plants mentioned by "A. D."—Larkspurs and Nigella—are most unsatisfactory on our heavy soil; in fact, many gardeners complain of the way in which the former dies off, however treated. I do not think we should slight or miss certain bedding arrangements simply because they will not last from spring or early summer until the frosts begin. The evanescent nature of an arrangement may be more than compensated for by its unusual and superior effect. Sometimes we grow a long

border of Spanish Iris, and what is more lovely? But halfway through the summer they have to be replaced by a batch of something else.—C. TURNER.

The Valdivian Wood Sorrel.—In Oxalis valdiviana we have one of the most accommodating of the Wood Sorrels, albeit it is one which cannot be considered a true perennial in our gardens, our winters bringing with them too many trials for this native of a warmer clime, and we have to depend upon its offspring to perpetuate the plant in our gardens. This is usually quite easy, as it sows itself freely enough to maintain the succession and to give us pleasure for many years. O. valdiviana is a pleasing Oxalis, with neat leaves and good yellow flowers, which, like those of others of the race, close in dull weather and at the approach of night. In some respects this may be a disadvantage, but this habit has the result of prolonging the beauty of each individual bloom, and therefore of the whole plant. O. valdiviana evidently likes a light soil, and is an excellent plant for the rockery or wall garden. It grows from 6 inches to 9 inches or 10 inches high, as a rule. Seeds can be sown where they are to bloom in March or April in the open, and will flower the same season.—S. A.

Apple Trees in Grassland.—Although I am far from favouring the growing of Apple trees in grassland, I could but think that, however strongly one might object to the practice, the selection of Apple trees for illustration as presented on page 155 was not quite fair. Here it was evident that the most robust-grown tree in the one case was presented for comparison with one of the worst in the other case. No. 1 tree, so robust and full of wood, resembles a well-grown tree of Annie Elizabeth, but has been allowed to make far too much wood, which, as the illustration shows, is deficient in fruit-buds. Such a tree, even if the head be occasionally thinned, would probably go on being sterile for years. With the surface soil manured, ploughed and cropped with roots or something else, what wonder if trees so treated have made strong, deep roots, which need hard severance to cause the trees to carry crops! I have seen Annie Elizabeth on grass making fine trees and carrying really splendid crops year after year at Sherborne; hence, whether we may dislike the practice or not, common justice compels us to admit that its condemnation cannot be admitted from one case only. What grand bush trees and superb fruits Mr. J. Hudson gets from his breadth on grass at Gunnersbury, the grass growing up 2 feet in height each year before it is mown. Several years ago I was invited by Mr. W. Crump, V.M.H., of Madresfield Court Gardens, to go there and act as a judge of a fruit tree pruning competition, which is held annually on the estate. We went out to a grass orchard several miles distant and found the trees and the competitors. Each man was allotted three trees, which he was to prune to the best of his ability in two and a-half hours. Much of the work was well done, but there was the fact that there were scores of standard trees on grass twelve years planted in fine health, full of growth and badly needing head thinning. Many of the trees much more nearly resembled No. 1, while there was not a tree of the whole lot so poor as the No. 2 illustrated. This is a further example of the fact that there are conditions doubtless due to excellence of soil, in which Apple trees will do well and are clean and productive on grassland.—A. D.

A Beautiful New Saxifrage.—Probably we shall soon see and hear a good deal of one of the finest of the true Aizoon Saxifrages, *S. Aizoon Rex*, which is a very rare form. It is one of the most prized of all the finds of Mr. Reginald Farrer, who tells us that he found it on "a precipitous, unprolific shale-slope below the Tossenhorn." Mr. Farrer calls it his "dearest pride," and although we outsiders can hardly enter fully into the feelings of the discoverer towards his foundling, we can see enough beauty in it to sound its praises enthusiastically. It has handsome, shapely, attractive rosettes of the real Aizoon form; it is a splendid doer; it has elegantly-borne flowers of an unsullied white, and these are elevated on lovely stems of a kind of carmine red. Silvery Saxifrages are superabundant in variety, but *S. Aizoon Rex* will hold its own.—S. ARNOTT.

Acacia dealbata Outdoors.—As an old subscriber to *THE GARDEN*, I thought it might interest you and readers to hear of a plant of *Acacia dealbata* growing in my garden here. I obtained the plant from Cannes in the year 1903, quite a small one, and planted it out as soon as I got it, and it has grown rapidly ever since. It is now a tree quite 25 feet in height and about twenty-seven feet through, and has been one sheet of blossom since the middle of February. The stem 1 foot from the ground measures 2 feet 11 inches in circumference. Frost does not seem to affect it at all. We had a week in January with 6° to 8° of frost every night. I send a photograph which shows the size of the tree. It has bloomed here every year, but this year it came into bloom quite a month earlier than usual and flowered much more profusely, which I attribute to the very warm summer of last year.—LEWIS RIAL, *Old Conna Hill, Bray, County Wicklow*. [The flowers on this splendid plant, owing to their yellow colour, do not show in the reproduction, but were just discernible in the photograph and bore out our correspondent's statements.—ED.]

Tree Ferns at Glasgow.—It is a common remark among visitors to Glasgow that they have never seen a more natural-looking group than that of the Tree Ferns in the Kibble Palace of the Botanic Gardens there. They are grouped in a most artistic and natural manner in the centre, and it is not difficult when looking across the house to imagine one's self in the native home of these magnificent Dicksonias and other Tree Ferns in their native Australia. The great size of the Kibble Palace has enabled the group to be arranged in a full and effective way, and Mr. Whitton, the curator of the gardens and superintendent of the Glasgow parks, has taken full advantage of the space available. Those who have not visited the place for a number of years, and who remember it in its old condition, are amazed and delighted at this group and the improvement it has effected in the large glass structure. The Ferns are of great size, well grown, and thrive wonderfully in what cannot but be an impure atmosphere, as Glasgow air is laden with chemicals.—A. M. D.

A Neglected Coleus.—The beautiful cobalt blue flowered *Coleus thyrsoideus* is such a universal favourite that any other member of the family that does not reach its standard is apt to be passed by. This must be the reason that we see so little of *Coleus shirensis*, a Central African species, introduced about ten years ago. It is a far sturdier grower than *C. thyrsoideus*, and forms a more shapely bush. The leaves, which are about six inches long and four inches wide, have, when rubbed, a distinct perfume, somewhat as in the old *C. aromaticus*. The erect flower-spikes are 6 inches to 8 inches in length, and are made up of a large number of blossoms. The upper part of the flower is a kind of light bluish violet, the lower portion being of a much deeper tint. This *Coleus*

THE KITCHEN GARDEN.

SWEDE TURNIPS FOR GARDENS.

THE Swede Turnip that is grown in gardens must not be classed with the ordinary field Swede, as it is much superior in every respect. Both the white and yellow kinds are remarkably hardy, and on this account specially good for winter supplies. The plant is admirably adapted for strong or heavy soils and poor land, though, of course, it well repays good culture in the shape of well-tilled soil and an open position.

Where Turnips Fail.—The garden Swedes will thrive where Turnips fail. They are more hardy,



ACACIA DEALBATA GROWING IN THE OPEN AT OLD CONNA HILL, BRAY, COUNTY WICKLOW.

will flower during the winter in an intermediate house while in spring the greenhouse will suit it.—H. P.

FORTHCOMING EVENTS.

April 16.—Royal Horticultural Society's Exhibition and Daffodil Show (two days) at Vincent Square, Westminster. Lecture by Professor Henslow on "Darwin as Ecologist." Shropshire Horticultural Society's Spring Show at Shrewsbury.

April 17.—Royal Horticultural Society's Examination for School Teachers and Allotment Gardeners. Devon Daffodil Show at Plymouth (two days). Royal Horticultural Society of Ireland Spring Show (two days).

April 18.—Ipswich and East of England Spring Show. Linnean Society Meeting. Manchester Orchid Society Meeting. Huntingdon Daffodil Show.

and therefore greatly prolong the supply of roots at a difficult season. The culture is simple, being much the same as for Turnips. The Sutton White is very good, a short-topped, well-shaped root and free from coarseness. The Crimson Topped is also a distinct root, with yellow flesh, and for late winter supplies is an excellent vegetable.

Time to Sow.—Being a distinct winter vegetable, diverse culture is advised. I do not recommend them for summer use, and as regards time to sow, so much depends upon locality. In the Southern Counties, June would be quite early enough to sow for a winter crop; indeed, on light soil in the South, to get as late a supply as possible I have sown early in July, as large roots were not required. At the same time, May and June are the most suitable months, and then a fair season's growth is secured. Give deeply-dug land and avoid rank

manures; indeed, land that was well manured for a previous crop will be best. Sow in rows 15 inches apart, or even more if room is plentiful, and thin to half the distance between the plants.

At the approach of winter the plants do well with some soil drawn up over the roots, though they are quite hardy. This prevents the larger roots splitting; or, if desired, the roots may be clamped or placed in a cold store. They will keep solid till the spring if treated thus, and are then more readily got at in severe weather.

G. WYTHES.

WAXPOD OR BUTTER BEANS.

I DO not think these Beans attain the amount of appreciation they really deserve. The pods when gathered young and cooked whole are exceptionally tender and delicious. It may be that the golden colour is not so pleasing to some as the green, but for tenderness I think nothing more could possibly be desired. The dwarf varieties are numerous, yet only about two or three are catalogued, which are probably enough, as it is not necessary to grow for the sake of variety. I find Mont d'Or very good, both for earliness and productiveness, while the quality is excellent. The Tall or Climbing Waxpod of the same name is probably one of the best of its class for earliness and productiveness, and if the season proves warm, the plants grow and set the pods very freely. I have grown these two for several years and am well satisfied with both, and can strongly recommend them where these Beans are to be given a trial. I do not know how far North they will succeed, but I am under the impression they are more tender than the green-podded varieties. Both delight in a deep, well-cultivated soil of rather a light texture, and in dry weather the roots need to be well watered. The pods set more freely if the plants are lightly syringed after a hot day.

H. MARKHAM.

Wrotham Park Gardens, Barnet.

ROSE GARDEN.

PERPETUAL-FLOWERING CLIMBING ROSES.

ONE cannot well over-estimate the value of such Roses at the present time. We are inundated

with ramblers. Far too many are introduced that are of little, if any, value, and many are absolutely no improvement upon what we already possess. But when a perpetual-flowering variety is introduced, we must certainly give it a trial.

I imagine the Climbing Mrs. Cutbush will be a Rose that everybody will want to possess. It gives a fine show of bloom and produces splendid growths, as much as 7 feet in a season. As a pillar

Rose such a novelty will be very welcome indeed, also for clothing the uprights of a pergola.

Herr Peter Lambert, who has done so much to add beauty to our Rose gardens by his many splendid introductions, is sending out this year one named Hauff, which, he says, is perpetual-flowering from the second year, and as it is a descendant from Aimée Vibert crossed with Crimson Rambler, it certainly should be a good thing. Its colour is violet purple, a shade of colour scarcely tolerated among show blooms, but in a rambler certainly a novelty worth adding. Both with this variety and Veilchenblau it needs great taste in colour arrangement to properly place them. I should say between creams or whites they would show up grandly.



THE NEW HYBRID TEA ROSE, ROSE QUEEN.

Jean Girin is a variety that I think will be a favourite. It is one that flowers from June until November, and bears large trusses of vivid pink flowers which have a rosy white centre. This variety received a first-class certificate at Lyons. Sylvia is a great advance. It is not only perpetual-flowering, but possesses the lovely foliage of the wichuraianas and also a delicious fragrance. Its colouring is creamy white, and the flowers are large for its class.

I expect we shall soon have some additions to these perpetual-flowering Roses raised from Trier, the very lovely perpetual semi-climber, as I know some hybridists are working upon this variety. Their usefulness will be more in the form of big bushes rather than climbers, but there is room for such Roses. When planters are fully alive to the possibilities obtainable by planting out such Roses singly, or even as shrubs grouped with other subjects, they will be wanted, although I should prefer to see them isolated upon lawns, where they can have plenty of space for development. In the large gardens that abound all over the country there are plenty of spaces that could be allocated to such Roses, and even in the bulb garden quite a number could be planted, because one might surround them with Narcissus or other bulbs without detriment to either.

There are some interesting sports, too, among the Hybrid Teas — climbing sports I mean, such as Climbing Killarney, Climbing Mme. Jules Grolez and Climbing Lady Ashtown—that will be of great usefulness and able to be used in a variety of ways. I am planting these and Roses of the type of Florence Haswell Veitch, Beauté de Lyon and Juliet upon a bank many yards in length. The hedge of Whitethorn has been cut down to the ground and large holes have been dug out and enriched with manure, so that I hope to have a really fine show of big bushes in a year or two. I have already huge bushes some 7 feet high and as much through of Nova Zembla and Conrad F. Meyer, and what is possible with these will be possible in perhaps a lesser degree with the Roses named; in fact, there are so many grand sorts now of such marvellous vigour that it seems incumbent upon one to grow them all, even if one's collection is increased to an alarming extent. I see no objection to having a few even in the herbaceous borders, planted of course, among low-growing subjects, such as the Geums Achilleas and the like. P.

A NEW FORCING ROSE.

THE forced flowers of the new Hybrid Tea Rose, Rose Queen, as shown before the Royal Horticultural Society a few weeks ago, establish beyond doubt that the new-comer is likely to prove of great value for early work. It is an American seedling introduced by Mr. W. E. Wallace of Eaton Bray, who secured an award of merit for this sterling novelty on making its *debut* in this country. As previously described in our columns, the shapely flowers are of the Lady Ashtown build and character, with possibly somewhat the colour tone of Caroline Testout. As a forcing variety it is not likely to clash with any existing sort, and there is every reason to assume that it will become popular in the near future.

THE FLOWER GARDEN.

SWEET PEA NOTES.

Planting Out.—How many scores of thousands of Sweet Peas raised from seeds sown in pots or boxes in the autumn or spring have already been planted out in gardens in various parts of the country? How many scores of thousands still remain in pots and boxes for planting out? I should greatly like to have answers to these questions, but doubt the possibility of securing them. I am quite sure that the total number would come as a surprise even to those who are best qualified to judge of the popularity to which the Queen of Annuals has now attained. The answer would represent several hundredweights of seeds, and it needs but a simple problem of arithmetic to prove that such will spell hundreds of thousands of seeds. Let us hope that the present wave of prosperity will continue long to flow.

Last season there were two things which might militate against unceasing and increasing popularity. The first was the terrible weather

they would never grow Sweet Peas any more owing to the failure mentioned. Well, I am sorry, of course; but those who fail to rise from the first blow must be pretty thin-blooded, and the cult will not, therefore, lose much because they do not become adherents.

The preventive of yellowing, in many instances, is to plant clean, healthy plants in sweet, friable, rationally-prepared ground, and this is the task that should be accomplished forthwith. Weak, spindly specimens which have been coddled feel the check of moving, and are thus predisposed to receive the worst effects of any trouble which may happen to come along. Strong, sturdy, hardy plants never stop their forward progress, and in their stout tissues they possess an undoubted natural power to throw off all except the most serious attacks.

The soil will, of course, have been prepared long ago, or it should have been, and the planting alone has to be done. Plants from 6-inch pots demand a great depth of friable mould, because the roots are long and numerous; those from 3-inch pots should have an equal depth, but the

such a gorgeous display of Crocuses as that shown in the accompanying illustration. This has been prepared from a photograph taken and kindly sent to us by Mrs. Gordon, Potternewton House, Leeds. In a letter which accompanied the photograph Mrs. Gordon mentioned that the grounds are within two miles of the centre of the City of Leeds. We welcome photographs of all kinds from our readers, as any which are suitable for reproduction enable us to record beautiful effects that would otherwise pass unnoticed.

HARDY BORDER AURICULAS.

I HAVE been mentally comparing the aims of the Daffodil-growers, as presented in the schedule of classes prepared by them and adopted by the Royal Horticultural Society for competition on the 16th inst., with that of the National Auricula Society as seen in its schedules of classes for these particular flowers in past years. Daffodils are at this time of year and later such universal outdoor or garden flowers that only from such sources can the flowers exhibited come. Thus the classes



A WOODLAND SCENE IN SPRING: CROCUSES AT POTTERNEWTON HOUSE, LEEDS.

which we experienced in practically all parts of the kingdom shortly after the over-eager had put his plants into their permanent positions. I do not, however, fear much from this, since losses due to such a cause are so easily preventable, and it is reasonable to assume that the man who has been severely hit will take excellent care that a similar happening shall not occur again from the same cause. The second trouble, and it is to be feared the more serious, was the immense number of plants which attained to a stature of 3 feet or thereabouts, yellowed and died without having given a single picking of flowers. The tyro who is just crossing the threshold of the cult and has not yet drunk to the full of its many pleasures will not stand many blows like that, and I sincerely hope that the season upon which we are now entering will not be so fruitful of disasters. I heard of many, and met a few, persons who were slightly bitten by the fever—due originally, perhaps, to the fact that they thought they had a chance of annexing one of the many splendid prizes being offered—who had said that

immediate necessity for it is not so apparent owing to the much shorter and more curled character of the roots. It is often a source of worry to amateurs to know whether to shake out the roots or not. They fear that if they do so a check will ensue, and possibly they have been told that if they do not do so the roots will never satisfactorily ramify from the ball in which they come out of the pot. To the first point it will suffice to say that, properly handled and managed, there will not be the slightest cessation of advance; while to the latter point it may be said that the fault is with the cultivator, who should not have allowed them to come to such a state; but, seeing that it prevails, by all means shake them out or loosen in some way, or it is hopeless to anticipate the finest results.

HORACE J. WRIGHT

CROCUSES IN THE WOODLAND.

ON several occasions we have referred to the beautiful effects obtainable by the free use of Crocuses and other spring flowers in grassland and woodland. We do not, however, ever remember seeing

are literally open for competition to all who have gardens, however small, and who grow but a few Daffodils. Really they are presented as garden decorative flowers; hence interest in them as such is greatly enhanced. In the case of the Auricula show, the classes for these very beautiful flowers are limited to florists' varieties, all of which are grown in pots under glass culture, which necessarily entirely unfits them for outdoor or hardy border culture. But so far there never has been a single class for hardy border varieties, plants in good clumps shown as such, as border Polyantheses are, and which have encouragement because they add so much to the spring garden.

I was surprised to read elsewhere recently a very deprecatory article on the Auricula as a border flower. The conclusion was astonishing, seeing that myriads of Auriculas are so grown and thrive and bloom finely. Possibly the writer was referring solely to show or florists' varieties. These are not fitted for outdoor planting. But we have a very hardy border section suitable for the garden

that merit as much encouragement as any of the finest shows or alpines. What is needed in connection with this border section is that some enterprising and enthusiastic amateur should take them in hand and greatly improve them, for there is ample room to do so. A few packets of seed obtained from diverse sources, sown at once in shallow pans or boxes on fine soil, shaded from bright sunshine and kept gently moist, would in a few weeks give hundreds of plants. These, when strong enough in leaf and root, should be dibbled out into a nursery bed in a slightly-shaded position, the bed, 4 feet wide, being somewhat raised in the centre, as Auriculas are impatient of water lying about them. If put out 6 inches apart, probably every plant would flower the following spring. Then a drastic weeding-out should take place, preserving only those which give bright, rounded flowers held erect on stiff foot-stalks, and if but few, perhaps so much the better. From these seed, so far as was practicable, should be saved and sown a couple of weeks after being found ripe, as germination on the part of these hard-shelled Primula seeds follows so much more quickly when new than when old. Were that course of hard weeding-out of all poor colours or inferior flowers or stem-supports adopted fearlessly each year with all seedlings, in some eight or ten years a vastly-improved strain would be secured, and one which even then could still be developed. It would not do to retain weakly plants, as for outdoor work only quite free-growing, robust ones will do. In a garden here in Kingston last spring, on a border facing west, I saw a large number of strong Auriculas flowering most profusely, and they were quite a charming sight. Too often border Auriculas suffer too much from being grown on the flat. If a special border were made for them, with some old brick or mortar refuse, small portions of broken brick and some wood-ashes well worked into the soil, at once creating a ridge or raised mound on which to put out the plants, they would not only greatly benefit, but be far more enduring. It is also good policy, when plants get large or straggling, to lift them, pull them to pieces, cut away all decaying stems or rootstocks, and replant. The spring, so soon as the bloom is over, is, as a rule, the best time, as just then Auriculas make new roots. The National Auricula Society offers prizes for hardy border Polyanthus; but in regard to these there seems to be little effort to create a superior strain. Really there is less quality, as a rule, seen in these flowers than was presented thirty years ago. They again offer a wide field for the amateur florist to disport in. A. D.

TWO FINE ASTILBES.

THERE have been numerous introductions from China during the last decade, but two of the best herbaceous subjects are Astilbe Davidii

and A. grandis. The former is similar to A. japonica, so far as the foliage is concerned, but on a larger scale, while the flower-stem reaches a height of 4 feet to 6 feet, the top portion being densely covered with small rose violet blossoms. The latter is very like A. Davidii in general habit, but it produces tall spikes of pure white flowers, and is a charming acquisition. Both are quite hardy, and will succeed in a damp border. S.

NARCISSUS ATHENE.

This Daffodil, illustrated herewith, was exhibited for the first time by Messrs. Barr and Sons on



NARCISSUS ATHENE, A NEW PALE YELLOW TRIANDRUS HYBRID.

March 19 at Vincent Square, Westminster. At first sight one would take it to be an ordinary trumpet hybrid, but on a closer examination its triandrus parentage is seen. We are accustomed to such triandrus hybrids as Dorothy Kingsmill and Princess Ena, which are bicolors; but to get a yellow self is a distinct novelty, and herein lies the interest of Athene. It is of a lovely self sulphur lemon shade of colour, with a short trumpet, boldly reflexed at the brim. Size: Diameter of perianth, $3\frac{1}{2}$ inches; trumpet, 1 inch long by $1\frac{1}{2}$ inches broad at the top. It is one of Messrs. Barr and Sons' own seedlings, and is as beautiful as well as unique variety. J. JACOB.

COLOURED PLATE. PLATE 1449.

THE MODERN GLADIOLI.

It is quite *à propos* that this week's coloured plate should be of Gladioli, for those who intend growing these glorious summer and autumn flowers should have the planting completed within the next week or so. Moreover, Gladioli are propagated by seeds, which ripen and germinate quite satisfactorily, and if not already sown it should be done with all possible haste. It is usual to sow in large pans or boxes, where the young plants may be thinned out and allowed to remain for the first season. The seeds germinate best in heat, and after hardening off, the seedlings may be stood outside during the summer months.

Planting the Corms.—With the exception of the early-flowering section, such as G. nanus and G. ramosus, which are best planted in the autumn, the bulbs, or corms as they are more correctly termed, may be planted now. In carrying out this work there are one or two salient points that merit attention. A deep rich soil, which must be well drained, and a sheltered, sunny position are requisite in order to grow Gladioli to perfection. The soil should have been prepared the previous autumn by trenching and the addition of copious supplies of well-decayed farmyard manure. Under no circumstances should fresh manure be applied just previous to planting. An error that is too often made is planting the corms with a dibber; by so doing the roots have not a fair chance to permeate the soil. It is better to plant with a spade or trowel. Allow plenty of room between the corms—1 foot each way will not be too much—and cover with about four inches or five inches of soil. Make the soil fairly firm, and then cover the bed with a light dressing of strawy manure.

Summer Treatment.—When the plants have made about a foot of growth, they may be assisted with occasional applications of diluted liquid cow-manure and soot-water. These may be given alternately once a week until the flower-spikes

make their appearance. At this stage the applications may be increased until the first flower of the spike opens, when manure-water should be withheld. After the flowering has ceased the corms should be lifted and dried, and after cutting off the stems be stored in a dry place till the following planting-time.

Wonderful improvement has taken place among the Gladioli in the last decade. Three handsome varieties—Queen Maud, Lady Muriel Digby and Flaming Sword—are depicted in our coloured plate. The flowers from which the original colour photograph was obtained were kindly sent to us by Messrs. Kelway and Sons, Langport, Somerset.

THE ROCK AND WATER GARDEN.

A BEAUTIFUL ROCK GARDEN PRIMROSE.

(*PRIMULA CAPITATA*.)

P *PRIMULA CAPITATA* does not seem to be grown to the extent its beauty justifies, and this is rather extraordinary, since it does not appear to be in any way difficult to cultivate, and has the very great advantage of coming into blossom in autumn, when nearly all other *Primulas* are over. In appearance it gives one the impression of a very refined *P. denticulata* of from 6 inches to 9 inches high. The leaves are much wrinkled, and to some small degree covered with farina, especially on the under sides, while the flower-stalk and calyces glisten with this white deposit. The flowers themselves are of a rich purple, though varying as to depth of colour in different plants.

The situation which it prefers seems to be one where the roots will always be moist, though where the plant will not be so fully exposed to the sun as to be scorched. At the same time, I find it does well where ample light falls upon it. In this consideration, however, I may be in somewhat special circumstances, being so near to London, and so never getting the sun as intensely bright as further out in the open country.

The soil may with advantage be composed of peat, leaf-mould, loam and sand in about equal proportions, and I usually add a quantity of broken brick which has passed through a half-inch sieve, and which seems to me to be appreciated by the plants, since their small roots lay hold of these hard nodules very readily, while such porous grit tends to keep the soil open.

Recently I have grown this charming *Primula* somewhat as a crevice plant, where its roots could deeply penetrate the soil before described, and the accompanying illustration gives some idea of its appearance as the flower-stalk rises from such a cleft.

In the spaces between the stones, either on the surface or at the edge of a semi-moist place, such as one of the many little "bays" which occur in the rock garden, this little autumn-flowering Indian *Primula* looks particularly beautiful. It comes readily from seed, and sometimes flowers the first year, though the plants are stronger if they do not do so till the second. Some plants which I pricked off in the late spring of 1911 were in flower with me at Christmas, and they were very welcome. This may perhaps have been due very largely to the abnormally "soft" winter we had up to then experienced.

Woodford, Essex.

REGINALD A. MALBY.

DOUBLE-FLOWERED PRIMROSES AND POLYANTHUSES.

OF late years the double *Primroses* have not received a high place in the consideration of fastidious gardeners. Their merits have been

somewhat overlooked and cast into the shade. This neglect seems due to the apparently superior attraction of bedding plants, as they are called, and the double *Primroses* have been rarely seen except in cottage gardens, where they do not receive even the slight amount of tending necessary to bring them to perfection. Under these circumstances any plant is bound to deteriorate, and the *Primroses* have proved no exception to the common fate and, in consequence, their high possibilities have been lost sight of by enthusiastic gardeners. Still, the fact remains that, for those who love a blaze of beautiful and varied colours to enliven the tentative brightness of early spring, the double *Primroses* have very great merits; and it is possible that gardeners are beginning to lament their neglect, for there have been many enquiries recently for rare and half-lost kinds, which, of course, are difficult to procure.

naked border, under conditions utterly different from those which Nature demands for the plants, meet with failure? The excessive evaporation and the blowing away of the leaves would be quite enough alone to account for failure.

As far as possible, the double *Primroses* should be supplied with the same necessities of life as the wild variety enjoys. They should be grown in rich vegetable soil, and the ground should be prevented from drying up unduly during the hot months of the year by layers of leaf-mould spread upon it before the warm weather sets in. The shade of the woodland should have its counterpart in the garden. They should be planted in some place sheltered and protected from the direct rays of the sun.

Propagation.—It is a good plan to choose some permanent place for them, for they should never be disturbed except for the purpose of division.



PRIMULA CAPITATA, A HIMALAYAN PRIMROSE SUITABLE FOR THE ROCK GARDEN.

The peculiar value of these *Primroses* is the great variety of colour possible—a quality rare and precious to us gardeners who aim at producing good colour-effects under an inauspicious northern sky. Scarlet, purple, yellow, red, salmon, white, lilac and blue are all possible colours, and the most brilliant shades should be sought after by those who want their results primarily for spring show.

Then the easy conditions of cultivation should do much to increase the popularity of these plants. Shelter from wind, partial shade and good rich soil are the only essentials for their well-being. In considering the question of *Primrose* culture, we cannot do better than be guided by the conditions under which the common *Primrose* grows luxuriantly. It is found in abundance in woods where the trees and grass afford an efficient shade, thriving on the moisture consequent upon this companionship. This being so, is it surprising that gardeners who plant *Primroses* in full sun on a

This point is most important, for double *Primroses* never produce seed, and one has to depend on division alone for their propagation. Division should take place soon after they have ceased flowering. It is very necessary to bear this in mind, and also that the only way to keep them in health is to divide them whenever they show any signs of deterioration. Like all other perennials, they have a tendency to deteriorate unless they are kept at the very highest state of vigour, and to have double *Primroses* in perfect health, the following precautions must be observed: Division after flowering, the occasional addition of new and rich soil, protection from strong winds and partial shade. Without these, good results cannot be obtained. I have seen them growing in a very satisfactory manner among Gooseberry bushes, these companions giving shade and shelter, so good for them. Here I have them planted in large masses in a border facing north, protected from

the south and east by a high, dense holly Hedge, and they produce excellent results.

The Best Varieties.—The best known and most easily grown are the White, Lilac and Early Sulphur. The finest and most difficult to grow is Pompadour, which, when at its best, is a sight to see with its beautiful velvety rich crimson flowers. As in the case of the rose and salmon shades, the more beautiful the tone the harder it is to keep them. In the colder parts of the country all these three should be grown in cold frames. The heat and long-continued drought from which we suffered last year proved highly disastrous to Primulas in general, and the death-rate was so high that there is likely to be a great scarcity of double Primroses this year.

The following may prove useful to anyone making a collection: White, Lilac and Early Sulphur, all very hardy and easy to grow; Amaranthina, sometimes called Red Paddy; Burgundy, crimson purple; Carnea, salmon pink; Croussii, violet, edged white; Cloth of Gold (Lutea Plena), fine large yellow flowers; French Grey, one of the most beautiful, very hardy and easy to grow; Pompadour, deep ruby velvet; Late Yellow; Rose, very lovely; Sanguinea, red; A. Dumollin, deep violet.

In course of time a number of other shades will be seen, including blues. A considerable amount of work has been done of late years in connection with the raising and cultivation of new coloured doubles, and we may confidently anticipate that the labour thus expended will bring satisfactory results, and that the new coloured plants will be increased as quickly as possible and brought upon the market. The double Polyanthus are also most interesting to cultivate, and quite worth the amount of attention involved in bringing them to a state of perfection. The finest I know are the old, almost extinct, Crimson King, a splendid double, strong growing, beautiful deep red—not the Crimson King of commerce, which is nothing but the double Primrose, Sanguinea Plena; Curiosity or Golden Pheasant, yellow and red; Tortoise-shell (Derncleugh), crimson, marked with gold; Harlequin, crimson, petals tipped white; Prince Silverwings, purple, edged white; and Rex Theodore, very rare and difficult to get, deep crimson and yellow.

Morelands, Duns.

JOHN MACWATT.

THE WHITE SIBERIAN SQUILL.

SCILLA SIBIRICA ALBA, the white Siberian Squill, is growing in favour as it becomes cheaper. I am not sure that I like it better than the blue variety, but it must be admitted that its white flowers come in well after those of the Snowdrops are nearly over, and the blue and the white Siberian Squills associate well together. S. ARNOTT.

TREES AND SHRUBS.

THREE BEAUTIFUL HARDY HEATHS.

THE hardy Heaths, *Erica lusitanica*, *Veitchii* and *arborea*, have been beautiful for weeks, and for the next month will be magnificent. They are much more hardy than is generally supposed. We have had 20° of frost this season, and this has not affected them in the least. I enclose a spray of each for you to see. [Very good.—ED.] These *Ericas* can be grown either from seeds or cuttings. They will grow in practically any soil where lime is absent. On the sides of

and the plants may be kept in shape by pruning for use. If not pruned in this way, the pruning should be done immediately the plants have done blooming, so that the new growth will not have to be cut away. All have white flowers. *Erica Veitchii* is a cross or hybrid between *lusitanica* and *arborea*. The last-named is very sweet-scented, and *E. Veitchii* takes after its parent in this respect.

The Gardens, Leonardslee.

W. A. COOK.

A NEW FLOWERING SHRUB.

(*CORYLOPSIS VEITCHIANA*.)

THE accompanying illustration of this shrub is from a photograph taken at the Royal Horticultural Society's Hall on March 19, when the plant was granted an award of merit by the floral committee. It clearly depicts the floriferousness and habit of this new introduction from China. The plant shown was raised from seed collected by Mr. E. H. Wilson when working on behalf of the Arnold Arboretum. The seed was sown in the spring of 1908, and the plant has since made excellent growth, being now about four feet high and nearly a yard in width. The flowers are produced about the same time as *C. spicata*, an old favourite among our early-flowering spring shrubs. *C. veitchiana*, however, has a delicious scent, resembling a *Boronia*, which characterises it from the former. The growth is also more upright, and the flowers are slightly paler than those of *C. spicata*, more loosely disposed and easily distinguished by the tomentose bracts, whereas those of its neighbour are membranous. The wood of this new species is slightly paler in colour. This shrub will, no doubt, when better known, become exceedingly popular. E. BECKETT.

Aldenharn House Gardens.

AN INTERESTING THORN.

CRATÆGUS TANACETIFOLIA is a Thorn which cannot easily be mistaken for any other, especially when in fruit, for in addition to the fruits being exceptionally large and fleshy, they are yellow in colour and bear a few scattered, leafy bracts on the surface. It is a native of the Orient, and was introduced to this country in 1789. Of somewhat fastigate habit, its branches

have a rather stunted appearance, and are usually covered with short spur-like growths. The hairy leaves are very deeply lobed, and most closely resembled by those of *C. orientalis*, which is found in the same region. Its flowers are white, and they are produced during May. The Apple-like fruits ripen during September and October, and are sometimes nearly an inch in diameter. Although introduced so long ago, it is not a common species, and really good examples are rare. It is sometimes grafted on to stocks of common Hawthorn, but is more satisfactory when grown on its own roots from seed. W.



CORYLOPSIS VEITCHIANA, A BEAUTIFUL NEW SHRUB WITH YELLOW FLOWERS. RAISED FROM SEED SOWN IN 1908.

hills or banks facing north or south, and when planted about in various and different positions, one has a longer season of flower.

When planting out from pots, a good plan is to use a little extra good and fine soil just to give them a start. A cartload of a mixture of half leaf-soil and broken peat, with a sprinkling of sand, will be enough to plant several dozen, taking care that the soil is made as firm as possible about the roots. When well suited in their requirements, they soon make large plants, when they not only become very decorative, but are extremely useful for cutting. Heather is always acceptable,

GARDENING FOR BEGINNERS.

HOW TO GET EARLY BEANS, MARROWS AND RIDGE CUCUMBERS.

ALTHOUGH it is yet too early to sow seeds of French and Runner Beans, Vegetable Marrows and Ridge Cucumbers in the open garden, the beginner who has a cold frame, or even a moderately deep box and a few good-sized pieces of glass, may make a start with these plants. The average amateur still has to realise that the Beans under notice will transplant as readily as Tomatoes. Marrows and Ridge Cucumbers he may know will do so, because the general practice is to buy a few plants from any chance dealer that may come along, plants that have become debilitated by too much warmth and insufficient air. Seeds are cheap and home-raised plants are usually far the best.

Sowing the Seeds.—In the issue for March 23, page 149, illustrations showing the draining of seed-boxes and the sowing of other seeds were given on



2.—SOW VEGETABLE MARROWS AND RIDGE CUCUMBERS IN POTS AS SHOWN.

this page, and the box shown in Fig. 1 has been drained and filled with soil in precisely the same way as then advised. Ample crocks or broken pots were placed over the drainage holes in the bottom, then some rough soil, and finally the sifted material. As a good quantity of Beans are required for a row, boxes are the most economical receptacles to use, as they hold a number of seedlings and do not take up a lot of room. They ought not to be less than 3 inches deep. The soil should be composed of the best loam obtainable two parts, well-decayed manure one part, or, failing this, Hop Manure at the rate of a double handful to each peck of soil, and a good dash of coarse sand. The seeds ought to be sown in rows as shown in Fig. 1. It will be noted that by this arrangement each seed has the maximum amount of space, and is really in the centre of a circle of its fellows. Nothing is gained and much may be lost by thick sowing. Cover the seeds with an inch of finely-sifted soil, give a watering with a fine-rosed can, and, after allowing the whole to drain, stand quite level in a cold frame. Both Runner and Dwarf French Beans may be raised in this way.

Marrows and Cucumbers.—

As the average amateur only requires a few of these, it is best to sow them in pots. I prefer to sow the Marrows three in a 5-inch or 6-inch pot, and the Cucumbers singly in 2½-inch pots, as shown in Fig. 2. For the purpose of illustrating this, Marrow seeds were also used in the small pots, as their large size renders them more conspicuous. The pots must be clean, dry and well drained, and soil similar to that advised for the Beans may be used.

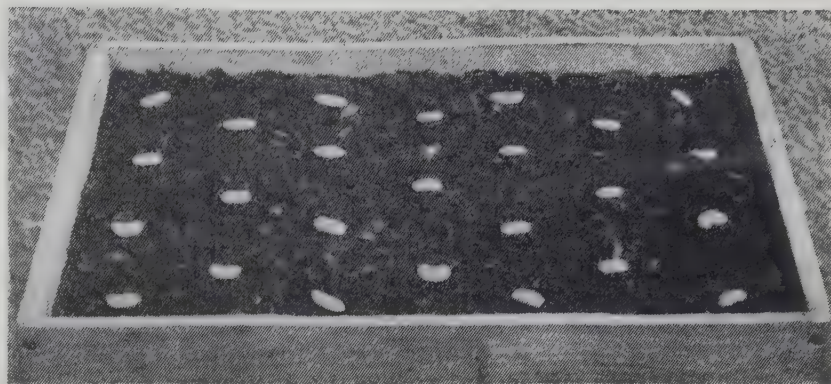
If frame room is plentiful—which is not at all likely at this season—the Marrows could be sown separately in the smaller-sized pots, though these are none too deep for the roots, which are coarser than those of the Cucumbers.

After-Treatment.—As already stated, a cold frame is an ideal place for the seed-boxes or pots after sowing and watering; but usually in the spring months the frame is filled with half-hardy annual flowers. If this is the case, procure a box about eight inches deep, make a few holes in the bottom to allow water to run away, and stand the receptacles in this, as shown in Fig. 3. A good pane or two of glass over the top makes a miniature frame that answers this and many other purposes quite well. If desired, the bottom can be knocked out of the box, and an earthen floor, coated with ashes, used.

As soon as germination has taken place and the seedlings can be seen pushing their way through the soil, ample ventilation must be given, taking care, however, to avoid as far as possible cold cutting winds blowing direct on to the young plants. But remember that robust, short-jointed plants are the ones that will give the best account of themselves when planted out. The positions where they are to go should be well dug and manured as soon as possible, so that by the end of the third week in May, when the seedlings may be safely transferred to the open, the soil will be in good condition. S. S.

CLARKIAS IN BORDERS AND POTS.

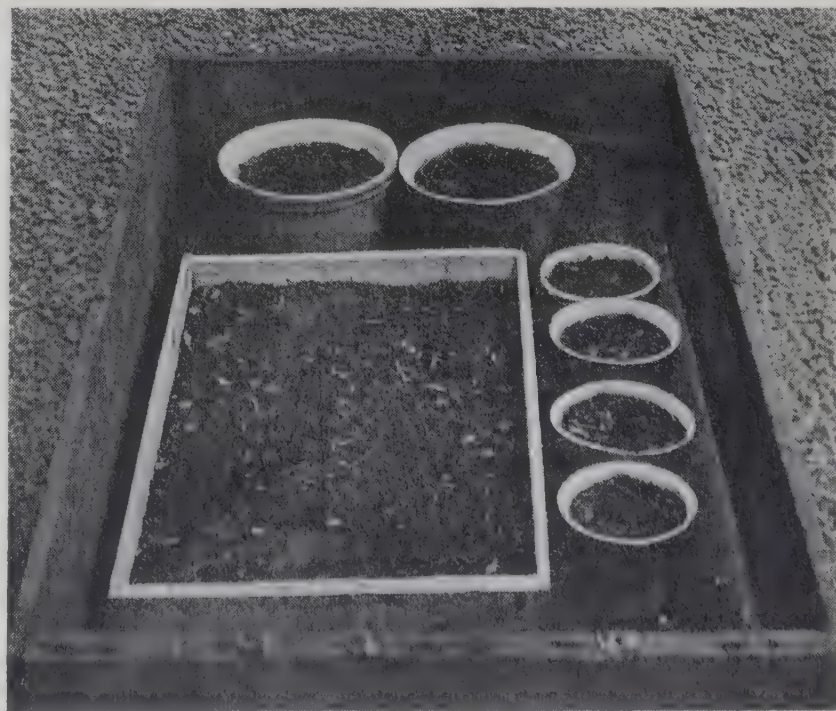
THE double-flowered Clarkias are very beautiful and make a brilliant display at a small cost. In open borders clumps of plants look very effective, and when well cultivated in pots handsome specimens may soon be had for the decoration of the cool greenhouse or conservatory. Few kinds of plants are more easily grown, and the beginner who wishes to have plenty of blossom in a short time should raise a stock of plants at once if for



1.—BOXES 3 INCHES DEEP ARE SUITABLE FOR SEEDS OF RUNNER AND DWARF BEANS.

cultivation in pots. Those intended for the open border must be sown during the latter part of April, and, again, more seeds should be sown at the end of May, and thus ensure a prolonged open-air display. As a compost use fibrous loam and leaf-soil in equal quantities, and add a 7-inch potful of rotted manure and a similar quantity of coarse sand to one peck of the above combined parts. Mix the ingredients well, and then three-parts fill a number of 6½-inch pots with the compost, taking care to put in a few crocks to ensure drainage. Drop about a dozen seeds evenly on the surface of the soil and lightly cover them with some finer sifted soil. When the young plants appear, thin out freely, not leaving more than five of the best in a pot. Grow the plants in a cool frame and admit plenty of air. Stake in due course, and feed with weak doses of liquid manure when the pots are well filled with roots.

A Few Beautiful Varieties.—Clarkia elegans White Prince, double, pure white; Salmon Queen, salmon; Purple King, purple; Brilliant Princess, rose; integripetala, both the double rose and double white; elegans, purple; and elegans alba, white. The two last-named may be grown in quantity in outside borders. SHAMROCK.



3.—A BOX ABOUT 8 INCHES DEEP COVERED WITH PANES OF GLASS IS A USEFUL ADJUNCT TO A COLD FRAME.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Summer Bedding.—The subjects intended for planting out for the summer display must now be seriously taken in hand with a view to thoroughly hardening them off for planting out next month. For the hardier subjects, means should be taken so that some protective material can be thrown over at night. Give the more tender subjects the protection of a cold frame. Admit plenty of air whenever possible.

Spring Bedding.—Encourage the plants as much as possible by aerating the soil with the Dutch hoe, and any plants needing a stake should be neatly attended to.

Wallflowers.—To obtain good strong plants, the sowing of these should not be deferred till too late a date. From the middle to the end of April sow the varieties thinly in shallow drills 9 inches apart, and when the plants are of sufficient size, transplant them into rows, allowing 6 inches between the plants. Where cut flowers of these are much in request, the plants, after the bedding is past, may be transplanted and given a mulch, later on they will provide a plentiful supply.

Violets.—For supplies for forcing next winter, take the earliest opportunity of increasing the old plants by division, and plant out in a border, selecting one for preference that is shaded from the brightest of the sun's rays. Plant 6 inches apart for the doubles, and allow the single varieties a little more space.

Hardy Ferns.—Many a shady corner might be devised into quite an interesting fernery with but very little cost. Now is a splendid time to plant.

Orchids.

Calanthes.—In the majority of cases the young growth will be sufficiently advanced for repotting. Shake away the old soil, taking care not to break the bulb, and leave a few of the old roots for a firm hold in the soil. Loam, rough leaf-mould, peat, broken potsherds and a little dried cow or sheep manure will be found a good compost. Secure the pseudo-bulb to a neat stick if needs be, and stand in a warm house. Water very sparingly for a time, but damp freely between and around the plants.

Cattleyas.—Many of these that have been in the same receptacles for several years will benefit by having the old compost pricked out and some new added just as growth is commencing. Insert a few patches of live sphagnum moss on the surface.

Sophranitis grandiflora.—This dwarf Brazilian Orchid is very pretty just now with its scarlet flowers suspended in small pans from the roof, and is suited for culture in a cool house. When growing give a fair amount of water, and in the winter this should not be entirely withheld.

Plants Under Glass.

Eucalyptus globulus.—Young plants that were raised from seed sown in a warm house will be ready for potting singly into small pots. For a time give them a warm, moist house; but later they can be treated quite coolly. They are fine foliage subjects for the conservatory and greenhouse, also for bedding out of doors during the summer months. For the former purposes *E. citriodora* is a plant worthy of extended culture.

Poinsettia pulcherrima.—A stock of this winter-flowering subject should be raised by taking the young growths from the old plants that were cut back to within eighteen inches or so of the base, and placed in a warm house to break into growth. Root them in a close frame with a brisk bottom-heat. A stock can also be raised from eyes inserted in sandy soil in pans.

Euphorbia jacquiniiflora.—Take cuttings of this as advised for the above, and insert singly in small pots.

Cobæa scandens variegata.—This attractive greenhouse climber requires an annual thinning in order to keep growth restricted and, furthermore, clean, and is seen to the best advantage when the growths are allowed to hang down from the rafters. Mealy bug is a troublesome pest, and should be kept in check.

Genista fragrans.—After the flowering period of this delightful old greenhouse favourite is past,

the plant should be trimmed into shape prior to recommencing growth.

Amaryllis.—After the flowers are past, and while growth is making, assist the plants with copious waterings and stimulants. These are necessary to ensure them flowering to the best advantage next year. Gradually give more air, and when the leaves are fully matured allow the plants to rest in quite a cool, airy structure.

The Kitchen Garden.

Winter Greens.—A sowing should be made this month of the various Kales for a supply during the winter months. Select a narrow border for preference, sow the seeds thinly and label each variety correctly. Net the bed over to protect from the birds. Avoid a piece of ground that has borne any of the Brassica tribe recently, not forgetting that Turnips come under the same category.

Chicory.—This crop is easily grown; it is of the greatest value for winter salads, and one of the easiest to force. Sow the seeds when the weather permits in drills, and thin when large enough to 8 inches or 9 inches apart.

Cauliflowers.—Make a planting of these, such as *Magnum Bonum* and *Walcheren*, in the open ground.

Celery.—The pans or boxes of seed that were raised the beginning of last month will need hardening off, so that the seedlings may be transplanted into skeleton or shallow frames in the course of a week or so.

Fruits Under Glass.

Pot Fruit.—To assist the trees to mature their crops satisfactorily with their restricted amount of room, top-dressing should be done, and to allow of sufficient space for providing water it is best to have zinc collars to fit the rims of the pots, or make similar ones with turves. Vines in pots must not be allowed to suffer for want of water.

Strawberries.—During the time the fruits are swelling, a warm temperature should be given the plants and water supplied freely, and the plants assisted with manure-water. When commencing to colour, remove to a cooler house where more air is given, and expose the fruits as much as possible to produce the finest flavour. As later supplies set their fruit, support with a few twigs or wire. Plants that have been forced and are taken care of and watered as necessary make excellent material for planting out of doors, and will supply a second crop in the autumn.

Watering.—When it is thought necessary, the borders of fruit-houses should receive a good watering, washing down some good artificial fertiliser or using properly-diluted farmyard drainings. Select a day, if possible, when the air is warm and the opening of the doors does not cause too much draught. Vines after the thinning process is completed benefit by a good soaking, providing, of course, the drainage is in good order.

F. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Vegetable Garden.

Broccoli.—Make another sowing, which may turn in for planting in better condition than that sown a fortnight ago.

Beetroot.—The main crop may now be sown in deeply-trenched soil, recently well pulverised on the top spit. Dell's Crimson and White's Black are reliable sorts. Large-rooted varieties must not be sown till the beginning of June.

Onions.—This is a generally suitable time to transplant early-raised Onions from the boxes to the garden quarter set apart for them. I dress the surface with superphosphate of lime previous to planting or drawing the lines. The roots should be deeply buried, but the base of the plants just under the surface. Once planting is completed, the ground is hoed, and, as a rule, the roots having been drawn through a mixture of soil and water, they need no further attention for some time.

Cauliflowers.—Early-raised plants now in 3-inch pots grow very rapidly, and must be planted out before the balls of soil get full of roots. In planting set them well into the ground, and water them in unless the soil is already wet. Protection

by means of inverted flower-pots, one over each, is imperative. The plants never obtain a proper grip of the soil, and must on that account be regularly supplied with water at the root, preferably weak manure-water. Soot is valuable, as it to some extent lessens the damage effected by root maggots.

The Plant-Houses.

Carnations.—More space will be wanted for Malmaisons, which may be had by turning out some of the winter-flowering plants.

Zonal Pelargoniums.—The recently-rooted cuttings now in 2½-inch pots should be transferred to others 4 inches in diameter. Keep them rather dry at the root till new roots begin to work, and pinch the point out of the plant a week or so subsequent to repotting. The plants must meanwhile be stood in a pit or on a shelf of the greenhouse near the glass.

Cyclamen.—Seedlings the roots of which have filled 2½-inch pots must also be transferred to others, but those 3 inches in diameter are to be preferred to a larger size. They should be in a warmer structure than Zonal Pelargoniums, but not a stove, and arranged within a few inches from the glass. Old plants going out of bloom may be placed in a cold frame, giving very little water at the root in the meantime.

Hydrangeas.—Recently-rooted cuttings will shortly need a shift on into 4-inch pots. These require very firm potting, and may be grown on in these pots all the summer and flowered early next year. But for late spring and summer flowering it is necessary to shift them on. They may either be placed for the present in a cold pit or a cold frame. Old plants yet to flower need abundance of water at the root and a gentle heat; but if for summer flowering should be allowed to come on in a cool structure.

The Flower Garden.

Annuals.—In late districts these should be sown, and in warmer localities *Nasturtiums* and various *Amarantus* may now be safely sown.

Larkspurs.—Though quite small, the seedlings raised in small pots or boxes should be planted out at once, even though bulbs are in the beds. They make scarcely any progress for some weeks. I am arranging *Mauve Emperor* with *mauve Ageratum*, and dark blue *Stock*-flowered with *Lobelia cardinalis* variety, *mauve Ageratum* and variegated *Ice Plant* for some principal beds.

Hollyhocks.—Young plants from seeds sown last September are now quite strong enough to plant out where they are to flower, and for ordinary decorative purposes they do not require such highly-manured ground as is usually advised. They are seen to the best advantage in groups of at least seven plants, set rather close together and of one colour, though isolated plants here and there in borders are not without a decorative value.

Sweet Peas.—These in most localities may be safely planted out in the course of the next ten days. I arrange them singly about two feet apart, and place the main sticks to them, as well as short pieces of dead Spruce branches, as a protection till established. Those from boxes must be tied to short sticks, and if the ground is infested with slugs, repeated dustings of soot will be needed to preserve the plants from being eaten.

The Fruit Garden.

Pears.—Where spurs have grown too large to give the buds and after-foliage room, it is worth while to examine the trees at this time and reduce any that have been overlooked at the winter pruning.

Apricots.—Quantities of leaf-buds just breaking into growth must be removed, leaving only a sufficient number to enable the trees to bring forward their fruit and to provide for another year. The observant man will most likely have reduced the number of buds already; if not, it is better to take them off by degrees rather than to denude the shoots at one disbudding. Our trees were in full bloom at the middle of March, but it is full early enough to thin the fruit.

Spraying Apples.—The buds are very forward this year, and if it is intended that they should be sprayed before the blossom has opened, it must be seen to at once. Spraying is of no avail unless it is so perfectly performed that every part is covered.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

DAFFODILS AT VINCENT SQUARE.

APRIL 2.

MY Daffodil memory does not go back to that of a certain good friend of mine, who remembers the time in the sixties when he had only *Telamonius plenus* and *Poeticus angustifolius* in his collection, and whose interest from that time has been incessant. I wonder if he has ever seen more beautiful blooms together at one time at any London show. I never have. Ten medals were awarded, and there were several smaller groups that did not come up to silver medal form. This will give my readers a little idea of the vast numbers of flowers that were exposed to view. The wonderful and distressing season was much in evidence. Here it was the Poets—Poets cut from the open in the month of March, an almost unheard-of event; there it was the rich colour of the red and red-edged cups; while there were reminders that the season has been none too kind, and that Daffodils do not appreciate the bustling antics of King Sol.

Notable Exhibitors.—The Rev. G. H. Engleheart, our universal provider, was pretty well at the top of his form, and his display of yellow and bicolor trumpets was very fine. These, with some lovely Leedsii and Poets, formed an exceptionally interesting group. Every one was a new seedling, and before the Plums were picked out there must have been about one hundred and thirty varieties. I measured some of his largest. The figures will tell their own tale. Largest yellow trumpet: Diameter of perianth, $5\frac{1}{2}$ inches; trumpet, $1\frac{1}{2}$ inches long by $2\frac{3}{4}$ inches wide at brim. The largest bicolor was 5 inches by 2 inches by $1\frac{1}{2}$ inches, and the largest Leedsii 5 inches by $1\frac{1}{4}$ inches by 2 inches.

Messrs. Barr and Sons had a large collection of old and new varieties. An old friend which I was glad to see again was Golden Jubilee, of Haarlem fame. It is a particularly good example of the giant incomparables, as I suppose we should now call them. The perianth was, however, ribbed; but this is a rough year, and many things show its signs. Aurelia, a hybrid between Monarch and *Jonquilla simplex*, is a very deep yellow bloom after the type of Buttercup. Brunhilde is a giant Leedsii ($4\frac{1}{4}$ inches by three-quarters of an inch long by 1 inch) of much substance and a tall grower. Its perianth is of the double triangle order, and is a nice shade of pale yellow. Sheba, which was shown last year at Birmingham, has a peculiarly deep shade of red in its eye; possibly madder red is as near as one can get in a description. Another flower with a white perianth and fiery red cup is Ruby. It has a beautiful smooth and symmetrical appearance. I think I mentioned Mohican in my last notes as a sister flower to Sunrise. It has much the same character, but is not so round. I am told that it is very good for pots, and it is one of the things I have put down for a trial next year. *Cœur de Lion* looked striking in two large bunches. It is a little like a larger and a redder cupped Castile. Talking of bunches, what is there better or more effective than the old Firebrand? It is small, but in a mass one sees nothing but the wonderful little red cups.

Varieties to Receive Awards.—Mr. A. M. Wilson's group was full of good things. Indeed, there were so many of them, and no poor ones by way of contrast, that it took one a considerable time to realise the feast provided.

Three varieties received awards from the *Narcissus* committee. *Crœsus*, a giant incomparabilis, with a circular, widely-segmented perianth of a pleasing shade of primrose and a large, widely-expanded cup of deep rich red, was given the rare honour of a first-class certificate. A splendid pale bicolor, *Killicrankie* (perianth, $4\frac{1}{4}$ inches; trumpet, $1\frac{3}{4}$ inches by $1\frac{3}{4}$ inches), has a somewhat campanulate form, with the three inner segments slightly twisting. Unfortunately for another good pale bicolor, *Onslaught*, it was up for an award, too, and not so very long since it would have been sure of one; but now it was but a foil. It is little incidents like this that make us realise how our standards are being gradually tuned up. *Pedestal* is a solid-looking bicolor incomparabilis, the segments of which are broad, thick and much overlapped. The large cup is straight and of a full rich yellow. Here, again, *Neptune* was up against it, and although it is a flower of good quality, it had to be passed over in favour of *Pedestal*. A solitary bloom of an almost pure white little Leedsii called *Geheimniss* attracted the attention of all who like highly-refined flowers. It is only $2\frac{3}{4}$ inches in diameter, with a three-quarter-inch cup. I like *Red Macaw* (3 inches in diameter, with a 1-inch cup). It has a sharply, clear cut cup, with a broad, fairly well-defined red edge, a yellow centre and a smooth, good-looking white perianth. This particular type of colouring always appeals to me. *Princess*, for its price, is one of the very best white trumpets that are in commerce. It has an excellent perianth and shows great refinement and quality. It is listed at 12s. 6d. *Cossack* is a striking-looking Barri with broad, overlapping white segments of much substance, undulating in its general appearance, and centred with a well-proportioned cup of pure deep crimson. *Kingsley* was well shown.

Other Good Groups.—Messrs. Cartwright and Goodwin, as usual, had a good group, but there were not many novelties. *Onslaught*, which has much of the look of *Weardale Perfection*, I have already referred to. It is rather on the small side; its perianth is only $3\frac{1}{2}$ inches across. *Red Sundew* is a large, loose flower ($4\frac{1}{8}$ inches by three-eighths of an inch by seven-eighths of an inch), with an all-red cup passing to orange in the centre, and a pale yellow perianth. *White Nectarine* is the giant Leedsii which develops with age a deep buff edge. It is in this stage a decidedly out-of-the-common bloom. I never had a good look at *Henry James* before this show. It is a fine flower of high quality, and has pure white petals of great substance, much rounded and overlapping. It has a flat, soft yellow cup, faintly edged with buff.

Mr. Bourne had *White King*, a shapely giant Leedsii of great flatness; *Little Joan* ($2\frac{1}{2}$ -inch perianth and three-quarter-inch cup), another *White Leedsii*, with a beautiful flesh-tinted centre and an all-white perianth—a little gem; *Red Armored*, a starry flower with a fair perianth and a small reddish cup. There were two vases of *Bernardino*; no praise is too great for it. It is one of the "very great" Daffodils. *Rydal Water* is a really lovely bit of quiet refinement. Its large buff-yellow eye is well set off by a good white perianth.

Mr. Chapman of Rye showed a very fair group in which his own seedlings held a conspicuous place, a large proportion of which were red cups. He had a remarkable number of Poets. *Horace* was particularly good; so were *Virgil* and *Kingsley*.

Sea Horse was shown at Birmingham last year, I believe, for the first time. It is a seedling from *King Alfred* crossed with a *Monarch* seedling, and for refinement takes "a lot of beating." Mrs. Walter Wright might be noted as a good triandrus hybrid.

Messrs. R. H. Bath had some of the best pot-grown Darwins that I have ever seen. Really, they were in fibre, in bowls. They also had a little lot of, for the most part, stock varieties of Daffodils. *Southern Star* stood out well, and I heard several people remark about it. It is a bright flower. Lord Kitchener, the famous white Pearl of Kent, *Bernardino* and others of lesser note were prominent.

Miss Currey varied the usual type of staging by dividing her flowers into two groups, with a round-tiered projection from the back of the staging in between them. Here were grouped that little band of pure white trumpets, *Atalanta*, Mrs. Robert Sydenham, *Lady of the Snows*, *Echo*, &c., which one always associates with the name of Currey. They are a highly-refined class, originally "made in Holland." *Lucifer* was conspicuous on account of the deep bright orange red colour. I would like to call readers' attention to it as a garden plant. A superb yellow was *Golden Shield*, one of the acquisitions to the stand made during the course of the morning. It is $4\frac{3}{4}$ inches by $1\frac{1}{2}$ inch by $1\frac{1}{2}$ inch in measurement, and has a beautiful smooth, palish yellow perianth and a rich yellow trumpet. I admired it very much. I believe it is to be offered at about seven pounds or eight pounds a bulb.

Robert Sydenham, Limited, had the pretty little *Cresset* and the large majestic *Noble* in good form. The latter is a fine plant, and should be acquired as often as circumstances permit.

It is another sign of the abnormal season to find such a good and varied exhibit come from Lowdham; but Mr. Duncan Pearson, notwithstanding the temporary loss of all his flowers *en route*, exhibited a most interesting collection, in which giant Leedsii were much in evidence. A large number of their own introductions figured, such as Hon. Mrs. J. L. Francklin, *Vega*, *Lowdham Beauty*, *Capella*, &c. Special mention must be made of the exquisite pure white trumpet, *La Lune*. *Pearl of Kent* was near at hand, and was literally "knocked out by it." The former is a bloom of the most refined type, and goes white with age. It has a 4-inch perianth and a trumpet 4 inches by $1\frac{1}{2}$ inch by 2 inches.

The show of April 2 will be long remembered—partly for its size and quality, partly as a product of this curious season. JOSEPH JACOB.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

***Narcissus Crœsus*.**—The award in this case is a sufficient guarantee of excellence, and *Crœsus* to-day is virtually unique, absolutely so in regard to its great spreading crown of flaming orange, which constitutes a blazing orb of fire. The perianth is of sulphur yellow tone and shapely in the extreme, though there is not quite enough of it in proportion. Hence we look forward to the time when *Crœsus* will inherit its kingly place, when the present moderately large perianth will be replaced by a more handsome and, as we think, fitting one. For the present its position is unchallenged. It is magnificent. Exhibited by Mr. A. M. Wilson, Bridgwater.

AWARDS OF MERIT.

Camellia cuspidata.—A very beautiful new species from China, whose miniature single white flowers will appeal to all. The glossy ovate acuminate leaves are $1\frac{1}{2}$ inches long and obscurely notched at their margins. The plant forms a bush several feet in height, and, freely studded with the white, yellow-anthered flowers, has a very pretty effect. Quite a charming greenhouse shrub of a twiggy growth in keeping with the plant generally.

Viburnum Davidii.—Obviously a plant of merit, and of high decorative excellence as well as distinctness. As shown the species is of low, spreading, bush-like habit, the handsome leafage abundant, above which in short terminal heads appear the trusses of pure white flowers. These were exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Pelargonium ambrosea.—A pink-flowered variety of the so-called "bedding Geraniums." As shown the plants were dwarf and freely flowered. The colour is a very pleasing shade of pink. From Mr. P. Ladds, Swanley.

Primula Juliae.—A rare and delightful stemless species from the Caucasus, whose tufted perennial growth of not more than 3 inches in height, and from out of which in all directions the deep rosy lilac flowers appear in profusion, render it a great charm. The roundly-cordate, crenate leaves are about an inch or so across, and in their neatness and form are in perfect harmony with a plant which is as ideal as it is real. From Mr. W. G. Baker, Botanic Gardens, Oxford.

Primula intermedia Mrs. James Douglas.—This may be shortly described as a glorified Mrs. J. H. Wilson, with handsome blue, white-centred flowers of alpine Auricula size borne in large umbels. Quite a gain in this easily-grown section of Primulas. From Mr. J. Douglas, Great Bookham.

Primula warleyensis.—A new and pretty species, with pale lilac flowers, from China, at present provisionally named as above. The plant is of a miniature habit of growth, and from its appearance we imagine it to be a soil carpeter, a plant of mountain pasture, a lover of moisture perhaps, and delightful in colonies after the manner of *scotica*, *farinosa* and others. The plant is quite dwarf, 2 inches to 3 inches or so, and has the demeanour of one having turf and low mountain herbage for its bosom companions and closest friends. From Miss Willmott, Warley Place, Essex.

Rose Mrs. E. Alford (H.T.).—If we say at once that in this new-comer appears the embodiment of the best attributes of Mme. Abel Chatenay and La France—we know nothing of its parentage, by the way—the reader will get an idea of its distinctive beauty. There are the well-rolled recurving petals of both of these, wedded to a longer and more pointed flower, such as Mrs. G. Sawyer. In the main the colour leans to a rather pale Mme. Abel Chatenay, but the flowers are handsome and well set up on firm, bold stems. The variety is nicely scented.

Rose Mrs. C. Reed (H.T.).—The colour is pale blush, and we are not lost in admiration for a flower so flat, spreading and squatty as this appeared to be, despite its large size. In our opinion it is devoid of form or comeliness, and we want both, with fragrance also if we can get it, in the best Roses of to-day. Both of these were exhibited by Messrs. Lowe and Sawyer, Uxbridge.

Narcissus Pedestal.—A lovely incomparabilis after the manner of Lady Margaret Boscawen, with possibly not a little of the refining influence of some triandrus hybrid in its veins. A variety of great merit.

Narcissus Killierankie.—A giant of the pale bicolor set, in which the perianth is ivory or cream and the huge trumpet of a sulphury tone. The flower is very handsome. Both of these were shown by Mr. A. M. Wilson.

NEW ORCHIDS.

No fewer than three first-class certificates and five awards of merit were made by the Orchid committee, an unusual number of good things for one meeting. The awards were made as follow: *First-Class Certificates.*—*Cymbidium Pameolsii* The Dell variety, shown by Baron Schröder; *Lælio-Cattleya Trimyra* (*Cattleya Trianae* × *Lælio-Cattleya Myra*), exhibited by Sir Trevor Lawrence, Bart.; and *Lælio-Cattleya McBeanianum* (*Cattleya Schrödera* × *Lælia anceps*), shown by Messrs. J. and A. McBean. *Awards of Merit.*—*Odontioda Cooksoniae* Cobb's variety, shown by W. Cobb, Esq.; *Cypripedium Roger Sander* (*C. glaucophyllum* × *C. Godefroyae*), from Messrs. Sander and Sons; *Lælio-Cattleya Orama* (*L.-C. dominiana* × *L.-C. blechleyensis*), and *Lælio-Cattleya Frederick Boyle Veitch's* variety (*Lælia anceps sanderiana* × *Cattleya Trianae*), both shown by Messrs. James Veitch and Sons; and *Odontoglossum His Majesty*, exhibited by Lieutenant-Colonel Sir George Holford.

The foregoing awards were made by the respective committees of the Royal Horticultural Society at the fortnightly meeting held on Tuesday, April 2.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

PLANTING WASTE GARDEN (M. L. E.).—The fact that the ground is bare is not a good sign, and Beech trees are among the worst by their shade and root-spread to attempt any planting in their near proximity. In the leafless condition of the trees in spring you get bulbous plants to thrive by reason of that alone, while, later, air and light being shut out, precludes growth. Coarse grasses likely to grow beyond the limit of dense shade would be the common Cock's-foot Grass (*Dactylis glomerata*) and the Wood Soft Grass (*Holcus mollis*) or its near relative, *H. lanatus*. You will, of course, have thought of the Primrose, Wood Anemone, Wood Hyacinth and other such things that delight in the shade, moisture and other congenial company, and to these you might add the Butcher's Broom, Solomon's Seal, Woodruff (*Asperula odorata*) and, not least, the Dog's Mercury (*Mercurialis perennis*), than which no plant delights more in tree shade and cool conditions. We consider this last a better carpeter of woodland or waste places than grass, and we imagine there would be little difficulty in establishing it. The common Pilewort (*Ficaria ranunculoides*) is also good. Of plants of bolder aspect, the common Bracken (*Pteris aquilina*), Foxgloves, Cow Parsnip, Loosetrife and Willow Herb are all worth recommending, the Foxgloves being

particularly valuable. *Spiraea Ulmaria*, common Bush, *Inula dysenterica* and the like, with *Neprodium Filix Mas*, are all plants of the wood and waste places naturally, and these should first receive consideration at your hands. Such a spot is the home of the Bramble, Bracken, Rush, Foxglove and Fern, and to introduce gay-flowering annuals would be but to introduce an alien condition and incongruity devoid of restfulness and charm.

ROMNEYA COULTERI AND CATERPILLARS (M. G. B.). There are only two means open to you that you may keep your plant of *Romneya Coulteri* free from caterpillars. One is to examine the branches and leaves frequently, and pick off and destroy any caterpillars which may be found. The other method is to spray the leaves of the plant with an arsenical wash when the caterpillars first appear. Such a wash may be made by mixing 1oz. of Paris green in thirteen gallons of water. Mix thoroughly and apply as a fine spray to both surfaces of the leaves. As the wash is poisonous, care must be taken in its use. A 2 per cent. infusion of white Hellebore has been recommended as a good insecticide for such cases; but we have had no personal knowledge of its action.

PLANTS FOR BALCONY (Hibernian).—There are plenty of subjects of an upright nature of growth, but few of a trailing kind that would be effective the whole summer. Various kinds of Clematis would look well, and they can be had in blue, mauve, white, pink and red colours. *Tropæolum speciosum* is very showy mingled with the beautiful silver Ivy, *maderiensis variegata*. We suggest, as the pots are rather wide, that you plant in each one a nice pot specimen of Polyantha Rose, of such showy sorts as Jessie, Orleans and Mrs. Cutbush, and, to trail over the front, Clematis, variegated Ivy and *Tropæolum*. All should be pot-grown, and may be turned out of the pots into the iron pots, presuming these latter have drainage holes. The Roses should be in 6-inch pots, and purchased just when about to come into bloom.

ALPINE PLANTS IN PERGOLA PATHWAY (S. C.).—If the pathway under the Rose pergola is of sufficient width, you might indulge in a variety of plants, employing a few of taller growth near the sides, and the more miniature growing throughout the centre, where the track would be most used. In no case, however, should the plants employed be of such a cushion-like nature as to obstruct the pedestrian; that is to say, the lowest-growing plants only should be used, the true carpeters, so to speak, and which do not mind a little treading to boot. Too frequently everything and anything is planted, and subjects which at flowering-time reach a foot or 15 inches high are not suitable, unless for side plants. The best method of planting is done by raking out rather deeply the interstices between the stones, filling up the gaps so formed with gritty soil or sandy loam, and dibbling little bits in rather freely. Some of the best things are the Sedums, and such as *S. acre elegans*, *S. album*, *S. hispanicum* variety *glauca*, *S. corsicum*, *S. brevifolium* and *S. Lydium* in particular. Of Thymes you might select *T. Serpyllum coccineum* and *T. lanuginosus*. *Mentha Requieni*, *Herniaria glabra* and *Arenaria balearica* are gems, and give carpets of emerald green. *Linaria pilosa*, *L. hepaticifolia*, the *Erinus*, *Mazus Pumilio*, *Pyxidanthra barbulata*, *Hippocrepis comosa*, *Draba aizoides*, *Campanula pusilla*, *C. p. alba*, *C. pulla* and *C. muralis* are all good. In cool shade near the sides, *Omphalodes verna* would be charming. In some few instances *Dianthus cæsius*, *D. alpinus* and *D. squarrosus* might be used. Aubrietias and Mossy Saxifrages are often recommended, though, as a rule, they are too tufted and free.

ROSE GARDEN.

PRUNING SEMI-CLIMBING ROSES GROWN AS STANDARDS (P. G.).—The first season such Roses as *Grüss an Teplitz*, *Ards Rover*, *Climbing C. Testout*, &c., grown as standards should be pruned back to about eight inches or ten inches from the point where budded. In later years the yearling growths may be left quite a considerable length, varying from 1 foot to 3 feet. By pruning fairly hard the first year we lay the foundation for a good spreading head, which is most desirable for this type of plant.

PRUNING CLIMBING MRS. W. J. GRANT (A. W. W.).—If you prune this Rose back hard it will not climb at all. The best plan is to allow it to grow unpruned for a time. Just shorten the laterals back to one or two eyes. You might cut down to the ground one or two of the five rods. This would induce it to break at the base. Dorothy Perkins produces much finer clusters if the laterals are pruned back, the very smallest to one or two eyes and the stronger to 12 inches or 15 inches.

WHITE DOROTHY PERKINS AS A TRAINED PLANT (H. E.).—Pot up at once a nice bushy own-root plant and cut back its growth to about eighteen inches. When the new shoots are a fair length, put split canes in the side of the pot and bend them into a balloon shape or in a pyramidal form. Now take the young, pliable growths and tie them on to the canes. You can bend these growths about in any manner, and they will soon form the desired shape. A wirework frame would, of course, be neater, and this can be soon made by a handy man. What would be better still would be for you to purchase a bushy plant in a 6-inch or 7-inch pot, and then put this into a larger pot, say, a 9-inch. You could then commence to train the long growths at once, and have some bloom this year. Plants raised from cuttings, put in in September and transplanted once, make ideal bushy specimens to pot up for this work. The plants are cut back when transplanting to about one foot from the ground, so that when lifted in the following autumn they have eight or ten shoots that will form a nice specimen at once.

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THE GARDEN

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6 Achillea, yellow ... 6d	6 Helenium magnif. ... 6d	9 Sunflower, perennial ... 6d	2 Golden Elder ... 6d
4 Anemone japonica ... 6d	3 Helleborus niger ... 6d	50 Sweet Pea Plants ... 6d	2 Gooseberries ... 6d
18 Antirrhinums, rose ... 6d	9 Hollyhocks, double ... 6d	25 Sweet Rockets ... 6d	2 Gelder Rose ... 6d
18 Antirrhinums, white ... 6d	12 Hollyhocks, single ... 6d	25 Sweet Williams, single 6d	2 Heath, Hardy ... 6d
18 Antirrhinums, yellow ... 6d	6 Heuchera, red ... 6d	25 Sweet Williams, double 6d	2 Honeysuckle ... 6d
18 Antirrhinums, mixed ... 6d	6 Heuchera, white ... 6d	9 Thrift ... 6d	2 Honeysuckle, white ... 6d
12 Aquilegia, double ... 6d	6 Helenium, orange ... 6d	12 Tomato Plants ... 6d	2 Honeysuckle, red ... 6d
12 Arabis, double ... 6d	4 Iris, German, blue ... 6d	12 Tunica saxifra. ... 6d	6 Herbs, mixed ... 6d
12 Asparagus Roots ... 6d	4 Iris, German, white ... 6d	3 Tritoma ... 6d	2 Hops, hardy ... 6d
6 Asters, perennial, blue 6d	4 Iris, German, yellow ... 6d	6 Valerian ... 6d	2 Irish Ivy ... 6d
6 Asters, perennial, white 6d	2 Lilium rosea ... 6d	6 Violas, A. Grant ... 6d	2 Jessamine, yellow ... 6d
6 Asters, peren., lavender 6d	2 Lilium Tiger ... 6d	6 Violas, Charm. ... 6d	2 Laburnum ... 6d
18 Aubrietia Græca ... 6d	12 Lily of the Valley ... 6d	6 Violas, Prim. Dame ... 6d	2 Lavender ... 6d
4 Auriculas ... 6d	6 Lupins, Tree ... 6d		2 Laurels ... 6d
3 Bocconia japonica ... 6d	9 Lupins, perennial ... 6d		2 Laurustinus ... 6d
18 B. Stocks, white ... 6d	12 Lychnis ... 6d	2 Abutilon ... 6d	2 Lilac, white ... 6d
18 B. Stocks, purple ... 6d	12 Linum, perennial ... 6d	4 Acacias ... 6d	2 Lilac, purple ... 6d
18 B. Stocks, scarlet ... 6d	12 Matricaria ... 6d	2 Arum Lily ... 6d	1 Lime ... 6d
25 C. Bells, blue ... 6d	12 Montbretia ... 6d	2 Asparagus Ferns ... 6d	1 Loganberry ... 6d
25 C. Bells, white ... 6d	25 Pansies, Md. Perrett ... 6d	6 Calla Lilies ... 6d	2 Mock Orange ... 6d
25 C. Bells, rose ... 6d	25 Pansies, pure yellow ... 6d	4 Coleus ... 6d	2 Mountain Ash ... 6d
18 C. Bells, double blue ... 6d	25 Pansies, Snowflake ... 6d	4 Cineraria ... 6d	2 Olearia Haasti ... 6d
18 C. Bells, double rose ... 6d	25 Pansies, Peacock ... 6d	2 Cyclamen ... 6d	1 Pyrus japonica ... 6d
18 C. Bells, double white 6d	25 Pansies, Cardinal ... 6d	2 Eupatorium ... 6d	1 Portugal Laurel ... 6d
9 Carnations, white ... 6d	25 Pansies, Emperor Wm. 6d	4 Fuchsias ... 6d	2 Privet, Golden ... 6d
9 Carnations, scarlet ... 6d	4 Pæonies, clump ... 6d	4 Geraniums ... 6d	1 Pyracantha ... 6d
3 Carnations, named ... 6d	6 Pentstemons ... 6d	4 Heliotrope ... 6d	6 Raspberries ... 6d
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4 Catch-fly, double ... 6d	9 Pinks, Mrs. Sinkins ... 6d	1 American Blackberry 6d	1 Rhododendron ... 6d
9 Chelone barbata ... 6d	9 Pinks, Modesto ... 6d	1 Ampelopsis Veitchii ... 6d	2 Sweet Briars ... 6d
12 Cistus, Rock ... 6d	9 Pinks, Paddington ... 6d	2 Ampelopsis Hedra ... 6d	2 Snowberry ... 6d
18 Coreopsis ... 6d	9 Pinks, Alice Lee ... 6d	2 Aucuba japonica ... 6d	12 Strawberries ... 6d
9 Cornflower, perennial 6d	9 Pinks, double mixed ... 6d	1 Azalea ... 6d	2 Southernwood ... 6d
12 Daisies, Monstro., white 6d	25 Pinks, Pheasant-eyed 6d	1 Berberis Darwin ... 6d	2 Spiræa, red ... 6d
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12 Dianthus, double ... 6d	6 Potentilla ... 6d	2 Currants, red ... 6d	6 Tomato Plants ... 6d
6 Delphiniums ... 6d	6 Pyrethrums ... 6d	2 Currants, white ... 6d	1 Tree of Heaven ... 6d
9 Doronicums ... 6d	6 Ribbon Grass ... 6d	2 Clematis, blue ... 6d	2 Tulip Tree ... 6d
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12 Gaillardias ... 6d	3 Rudbeckia pur. ... 6d	2 Clematis, yellow ... 6d	2 Vine, variegated ... 6d
9 Geums, scarlet ... 6d	3 Rudbeckia Newmanii 6d	1 Clematis montana ... 6d	1 Walnut Tree ... 6d
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9 Gypsophila, white ... 6d	12 Saponaria Ocymoid ... 6d	2 Deutzia, rose ... 6d	1 Weigela, white ... 6d
9 Gypsophila, pink ... 6d	3 Scabious Caucas. ... 6d	2 Deutzia, white ... 6d	1 Weigela, pink ... 6d
4 Hemerocallis ... 6d	6 Sidalcea, white ... 6d	2 Euonymus ... 6d	1 Wisteria ... 6d

OUTDOOR CHRYSANTHEMUM PLANTS, WELL ROOTED. Blush Beauty (pink), Champ d'Or (yellow), Carrie (golden), Enchantress (white), Goachers' Crimson (red), Hermoine (orange), Lizzie Adcock (deep yellow), Marie Masse (yellow), Marie Masse (pink), Madame Desgrange (white), 1/- doz. of any of the above.

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CHRYSANTHEMUM PLANTS. — 12

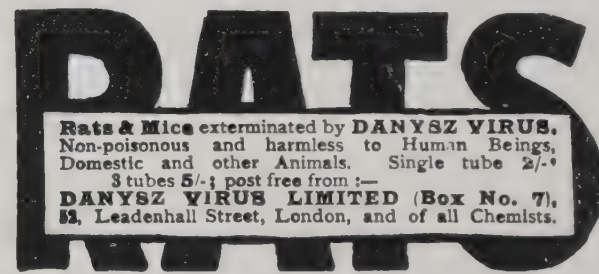
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THE GARDEN.

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APRIL 20, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Grape Hyacinths as Cut Flowers.—Common and easily grown as are the Muscaris, or Grape Hyacinths, few use them as cut flowers. They look very pleasing when cut, however, and are at their best when placed in glasses or bowls about a foot high and arranged with their own foliage. They should be strongly grown, and a rich, rather well-manured soil will give larger and finer spikes. They are frequently used in some good places, where scarcer and more expensive flowers than the Muscaris are available. *M. botryoides*, the common Grape Hyacinth, is the best.

Cineraria Matador.—Two years ago this Cineraria, from its distinct and effective colouring, aroused a considerable amount of interest. Since that time it has gained many admirers, and is now largely grown. What is more, it can be confidently recommended to those who have not yet taken up its culture. It belongs to what is generally referred to as the florists' section of Cinerarias; that is to say, the plants are dwarf, with large, massive heads of flowers. Their colour is the most notable feature, and an extremely difficult one to describe. Perhaps soft velvety red expresses it as well as anything, though we have seen it spoken of as a terra-cotta scarlet. At all events, it is a marked break away from the tints usually met with.

Coronilla glauca Flowering Outdoors.—We were interested to notice this charming plant flowering outdoors when calling upon Mr. C. Wakely, the County Horticultural Instructor for Essex, last week. The plant in question is in Mr. Wakely's private garden at Chelmsford, in a small border at the south side of the house, and has been outdoors, unprotected, all the winter. It is about a foot in diameter and of a similar height, and is well clothed with its bright golden yellow, Pea-shaped blossoms. The foliage is not so glaucous as is usual on plants grown in the greenhouse, and the habit is more compact. *Coronilla glauca* can be, and is, grown outdoors in the Western Counties, but it is not usual to find it in the open in the London district.

Primula Sieboldii in Spring Beds.—This delightful Japanese Primula enters largely into the composition of one of the most striking of the spring flower-beds at Hampton Court. The bed is planted with Auricula King of the Yellows and this Primula alternately, while disposed over the entire surface is that pretty pink Tulip Cottage Maid. At a little distance this bed presents a decidedly novel tone of colour, and it is seen at its best when closely inspected and reviewed from above. In some seasons the flowers of Primula Sieboldii are apt to be damaged by inclement spring weather, owing to which they are frequently

grown under glass and employed for greenhouse decoration. For this purpose they are well suited, as there are now many distinct and beautiful varieties, while, what is more, they, both in foliage and in flower, stand out apart from the many grand Primroses that we have now in our gardens.

Muscari conicum.—Visitors to Kew during the Easter holidays found a great source of attraction in a large group of this showy bulbous plant growing beneath tall-growing shrubs in the vicinity of the Tea Pavilion. In a recent issue we directed attention to its use in the same garden as a carpet plant for a bed of the white-flowered Magnolia stellata, when the intense blue of the Muscari contrasted finely with the glistening flowers of the shrub. Since that time we have noted it used with equally good effect in other instances for carpeting beds of shrubs, and consider that it is a plant worth noting by people who are on the look-out for subjects for that purpose. Its culture is of the simplest, for if planted in moderately light ground it gives no trouble, but goes on increasing year after year with considerable rapidity; in fact, if the bulbs are placed 4 inches or 5 inches apart in the first place, they will be so thick as to need lifting and dividing by the end of the third or fourth year after planting. It has the advantage of the leaves dying down early; therefore it does not interfere with the weeding of the beds throughout summer. Although we have not tried it among grass, there appears to be no reason why it should not succeed where the turf is moderately thin.

Destroying Pond Weeds with Copper Sulphate. The current issue of the *Kew Bulletin*, published by Messrs. Wyman and Sons of London, contains some useful information relating to the destruction of the scum-like weeds which are usually so troublesome in ponds during the summer. The proportion of copper sulphate used in the smaller ponds at Kew is one part to from 750,000 to 1,000,000 parts of water. It is first necessary to ascertain, approximately at least, the cubic contents of the water to be treated. The sulphate of copper should be obtained in a pulverised state, placed in a porous bag and dragged through the water until dissolved; or it may first be dissolved and then sprayed evenly on the surface, provided no Water Lilies or similar plants are present. It is mentioned that in St. James's Park for two summers the water has been kept free from scum by this method, and that the fish are not harmed thereby and are, indeed, free from a fungus that used to attack them badly before the copper sulphate was used. If it were used in larger proportion than recommended, it is probable that fish would be injured. Where the water from a pond is used for watering non-aquatic plants, it is advisable not to use the copper sulphate, except on a tentative scale.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Incarvillea Delavayii in Stiff Soils.—Too many people find that the handsome *Incarvillea Delavayii* becomes lost after a year or two through the roots rotting off. This is especially the case in stiff soils, and those who have such may well try the practice which has proved good with a few cultivators. This is to plant the roots in a raised mound of sandy soil, serving not only to keep the roots drier in winter, but allowing them to ripen better after the foliage dies down. In cold, wet soils this is particularly desirable.—A. M. D.

Single-Flowered Camellias.—"H. P.," page 154, issue March 30, refers to the variety *Apollo* in his note. I have seen some magnificent blooms of this variety, which were shown in a bowl at the recent spring show in Bournemouth by Walter C. Clark, Esq. The tree commenced to flower about March 1; it is growing in Mr. Clark's garden, and the flowers exhibited were faultless. It is certainly the finest variety I have ever seen, and for nearly thirty years I have been closely interested in, and associated with, the *Camellia* as grown in the open air. More plants should be grown, as even when they do not flower they form very handsome shrubs in the garden.—G. G.

Hyacinthus lineatus.—I much regret that the photograph which appeared over this name in *THE GARDEN* of April 6, page 169, is not that of *H. lineatus*, although the bulbs were received from a source which is usually most reliable, and the name has not been questioned until now. The authorities at Kew have kindly pointed this out, and the plant figured appears to come near *H. azureus*. It is, however, much earlier and hardier with me, and the leaves are broader and more numerous than those of *azureus*. There is, it appears, some conflict of statement regarding the synonymy of *H. azureus* and *H. ciliatus*. In the "Index Kewensis" *azureus* is referred to *ciliatus*, and in Nicholson's "Dictionary of Gardening, 1900 Supplement," *azureus* is said to be a synonym of *ciliatus*. The "Kew Hand List" has, however, the two as distinct.—S. ARNOTT.

The International Horticultural Exhibition.—A somewhat modest paragraph which appeared on a back page of *THE GARDEN* last week gives some rather belated information respecting this great exhibition, and not much of that. Does the executive realise that the date of that show is but five weeks distant, and that, if general interest in it is to be aroused, the Press, and the horticultural papers especially, should be furnished with the fullest information relating to the show every week? I do not think it is important to tell readers how many Orchid entries there will be or how many jurors are to act. What is wanted is information as to whether there will be reduced railway fares, both for visitors and for exhibits; what facilities to enable the show ground to be easily and directly reached from all the great London termini; what will be the caterers' charges on the ground; when will subscribers, Royal Horticultural Society's Fellows and gardeners' tickets be issued; also will there be provided a ground plan of the exhibition showing the position of each section of plants or exhibits? I was asked the other day how to reach the show from Liverpool Street, and I could not tell. I trust ample provision will be made for London as well as for provincial transit.—L. S. D.

Beautiful Flower Combinations.—One of the best plant combinations that have come under the observation of the writer was, as your correspondent "P. H." suggests on page 154, March 30 issue, the result of an accident rather than a studied scheme. In the forefront of a border some forty yards long was a row of blue *Lobelia*. Immediately behind was a line of Golden Feather (*Pyrethrum selaginoides*). This was followed by a line of *Calceolarias* (yellow) and *Ageratum* (mixed). Following this was a row of Sweet Williams with a backing of Gardener's Garter Grass (*Dactylis glomerata*). The flowers showed up exceedingly well with the light background given by the *Dactylis*, while the Golden Feather seemed to enhance the colour of the *Lobelia*. All the subjects mentioned succeed admirably beneath the shade of trees, very often the most difficult positions to furnish satisfactorily.—HORTON PARK.

The American Rose Society.—I see from a contemporary that this society is making arrangements to establish a public trial and testing ground for Roses, on similar lines to those at Bagatelle Garden in Paris, to be situated at Hartford, Conn. Surely after this British rosarians will not be slow to establish such a trial ground. It would be of great assistance to all concerned in enabling a just estimation to be arrived at regarding any novelty either in commerce or about to be put into commerce. The garden should be situated upon a good Rose soil, where full justice could be given to the varieties sent for trial, and every novelty procurable should be planted. If this were done, many beautiful introductions would not be lost to us, as they are to-day, owing to want of a full acquaintance of their merits, while, on the other hand, puffed-up introductions would also obtain their reward if not found worthy.—W. EASLEA, *Eastwood, Essex*.

Primula Gillii.—This is the name—provisionally given, I believe—of a new species from the High Himalayas, which, when exhibited by Messrs. Gill and Sons, Falmouth, at the Royal Horticultural Society's meeting on the 2nd inst., was at once the idol and delight of all hardy plant enthusiasts, none of whom had seen its like before. That fact alone might almost suggest the idea of a species nova, though there is no telling what may not exist in the unknown or little-known archives of herbaria. The plant itself is of the miniature order, and in all probability belongs to the deciduous section of the genus, of which *P. cashmiriana* might be cited as an example. The developed rosette of leaves, horizontally disposed, had a diameter of about two inches, the stem terminated by a capitate umbel of drooping, bell-shaped flowers. The leaves and stem are glandular pubescent, the former rather soft to the touch, and suggestive of those of the Cowslip in youth. The nodding flowers are about two-thirds the size of *Campanula pulla*, of almost royal purple shade without and violet blue and white within, the latter colour occupying about one-half of the base of the corolla. The flower-buds are of deep indigo. A peculiar, if not, indeed, unique, charm is the fringed character of the bells, which, so far as I know, has no parallel even in this remarkable and diversified genus. My only criticism is directed against the present name; and, assuming it to be a new species, one would prefer to see the far more appropriate and suggestive one of *P. soldanella-flora* adopted in its stead. The plant itself is a gem.—E. H. JENKINS.

Primula capitata.—I have been interested in Mr. Malby's excellent article on *Primula capitata* in *THE GARDEN* for April 13, page 183, but I do not agree with him when he expresses surprise at the fact that *capitata* is not more universally cultivated. As he says, *capitata* is a truly beautiful plant. The corolla is of the true Tyrian purple, and it shows up so very vividly against the mealy white farina of the scape and calyx tube. This striking effect is particularly noticeable when it is grown in the mass. However, its value to the practical gardener is somewhat depreciated by its unfortunate propensity for dying soon after flowering. I have had considerable experience of its habits, for I have reared many hundred plants during a period extending over several years, and I find that it flowers well either in pots, in cold frames, or in the open ground; but it is a bad perennial owing to the tendency I have just referred to. It is grown from seed, and it is always impossible to prophesy of any individual plant whether it will last or not after flowering. It resembles *littoniana* and *cockburniana* in this particular, and it is obvious how its value is lessened on this account.—JOHN MACWATT, *Morelands, Duns*.

Double Primroses.—I started to read Mr. Macwatt's article on these flowers (page 183, April 13) with considerable anticipation. I had hoped that, writing from the Northern and, for the Primrose family, highly-favoured locality of Duns, he would have described of his own growth many rather uncommon varieties doing well with him. But the final result of the reading was disappointment, because the writer had to tell us that even with him the drought of last summer was so disastrous that there is likely to be a great scarcity of double Primroses this year. It is just that heat and drought which, not content with roasting up double Primroses here in the South, seriously affected *Polyanthuses* also, and a winter of unusual rainfall following, has in many places generated a fungoid attack which has proved either weakening or destructive. But though double Primroses grew so freely in Scotland, we have here in the South for many years experienced the greatest possible difficulty in keeping even the commonest varieties alive. I can well remember, from thirty-five to forty years ago, that in Middlesex the Double White and Double Lilac were grown profusely in the market gardens to give flowers to gather for bunching and sale. But no such plants can be seen now. My late brother, R. Dean, at great trouble and expense got together a collection of twelve varieties, including the Crimson or Pompadour, Purple, Scotch Purple, Rose, Cloth of Gold or Giant Yellow, Croussi, A. Dumollin, White, Lilac and Sulphur, these last three being the best growers, but the others were most difficult to keep alive, even in the greatest shade and coolest place; indeed, they would soon become less, then die. Once in cottage gardens clumps of the White and Lilac, with those of the *Hepatica*, were very common. Who sees them now? They have succumbed to dry summer heat, which is so very inimical to the leafage, breeding thrips and red spider, which sucked it dry. I note that a few groups of doubles are planted out each year at Hampton Court, but they produce no good effect. We may regard them Southwards, in any case, as old favourites which have done their work, and now have to give place to other things. Double *Polyanthuses* down here are just as difficult to grow as Primroses.—A. DEAN.

The Origin of *Saxifraga apiculata*.—Referring to the origin of *Saxifraga apiculata* as commented on in your issue of March 29, may I say that I found this plant near Luz, in the Pyrenees, a few years ago, and it is quite indistinguishable from a plant sent to me under the same name from a leading English alpine-grower. The only difference was that at first my Pyrenean plant had a very slight encrustation, which has in the course of a few years' domestication practically disappeared. — L. H. EVANS, *Holme House, Canterbury*.

Rhododendron dauricum in the North.—A nice plant of this early *Rhododendron* has been very fine this year in the gardens of Troup House, Banffshire, the property of Mr. A. W. Garden. A plant some 5 feet or more in height gave a great profusion of bloom and was very fine indeed. There are two forms of this *Rhododendron* in cultivation, one being much later in flowering than the other. That at Troup House is the early one, and was in flower in February, not a bad record for what is considered a cold part of the United Kingdom, although near the sea.—SHRUBLAND.

The Variegated-Leaved Broom.—A long way short of the best varieties of the ordinary yellow Broom of the waysides and fields, so far as regards freedom of flower, is the variegated-leaved variety. It is, however, as a spring plant that it is most valued, as then the young growths and buds are of a bright and effective yellowish hue, and at a little distance it gives one the impression of being in flower. It is a plant which is amenable to clipping back after flowering, so as to prevent it from becoming leggy and scraggy, and when so treated can be made to assume a neat, yet not formal shape.—A. M. D.

The Hardy Brooms.—I was much interested in the article under the above heading in the issue of March 30, page 159. Undoubtedly, when grown in masses, these plants are most effective. I do not wish to refer to varieties, as the references in the article named are so clear and useful, but to the fact that the plants do not withstand lifting and replanting very well when they are large. In the New Forest district of Hampshire grand results are obtained from seedlings, which are never disturbed, the plants flourishing in a few inches of peaty soil on a gravel subsoil. The white Broom looks lovely in the woods.—B.

Summer Bedding Flower-Schemes.—"A. D.," page 154, issue March 30, has some very interesting comments on Mr. C. Turner's arrangements of pink Sweet Williams and Canterbury Bells, issue March 16, page 130. It is a very important matter, when several kinds of flowers are associated in the same bed, that they have flowering periods of about equal length. For many years I used to bed out annually nearly thirty thousand plants, and always endeavoured to select kinds that would flower for a long time. Once I was requested to make certain alterations and include Ten-week Stocks and other kinds still shorter-lived as regards flowering. The attempt to introduce a change of this kind was a failure, as the beds formed part of a big scheme of colour contrasts and harmony. Few plants excel Violas, Phlox Drummondii, hybrid Verbenas and Dianthus for long-period flowering if spent blooms be regularly removed. As top or dot plants to carpets, Fuchsias are excellent. The dwarf Evening Primrose as a groundwork, with *Nicotiana affinis* as dot plants, would answer a useful purpose. Single-flowered pink Petunias and dot plants of *Heliotrope* are lovely. No

edging is necessary. If one is preferred, use white Violas.—SHAMROCK.

Prunus triloba.—This beautiful member of the Plum family, so eulogistically referred to in THE GARDEN for April 6, merits everything that can be said in its favour. It is, however, a great pity that for permanent planting it is so difficult to obtain plants on their own roots, as the usual method of increase in nurseries is to bud or graft them on to the common Sloe, the suckers from which are a continual nuisance. Undoubtedly this mode of propagation ensures saleable plants in less time than any other, and thus enables them to be sold cheaply. Plants on their own roots would be appreciated by many, and though, owing to layers or cuttings taking a longer time to attain saleable size than grafted or budded plants, the price would, of course, be somewhat



THE NEW PRIMULA GILLII (NATURAL SIZE).
(See page 190.)

higher, a good demand for them would be certain. The same remarks will also apply to the pretty little *Prunus japonica* or *sinensis*. None of the above roots readily from cuttings, though I have had a fair measure of success from the young shoots pushed out by forced plants in early spring.—H. P.

FORTHCOMING EVENTS.

April 23.—Breconshire Daffodil Show. Lincolnshire Daffodil Show.

April 24.—North of England Horticultural Society's Show at the Corn Exchange, Leeds. Lantern Lecture on "Mendelism," by J. M. Hector, Esq., B.Sc. Royal Botanic Society Meeting.

April 25.—Midland Daffodil Show at Birmingham (two days). Norfolk and Norwich Horticultural Society's Spring Show. Falmouth Spring Show (two days).

DAFFODIL NOTES.

GROUPS AT SHOWS.

I HAVE read with much interest the remarks in recent issues of THE GARDEN of Messrs. Herbert Chapman, C. Bourne and W. A. Watts with regard to the arrangement and judging of Daffodil trade groups at the Royal Horticultural Society's Tuesday shows, and as one of those who on every occasion this year have acted as judges, I would like to make some observations with regard to the same.

First, it should be noticed that I have said "trade groups at the Royal Horticultural Society's Tuesday shows." This is important for two reasons; primarily, because I take it to be what each correspondent means when he talks of groups, and, secondly, because there are differences between trade group staging and competitive flower staging, which must be obvious to anyone who gives the question a moment's thought. The latter is a fairly simple matter. Practically, there is only a sort of "Hobson's choice" about it, and for competitors and judges everyone must allow that it is well it should be so. The alternative would be chaos and doubly confounded confusion, and profound perplexity and head-scratching with certain baldness to follow, among these principals in the fight.

With trade groups at shows it is different. There is no "Hobson's choice." There is no general consensus of opinion as to the standards of excellence which should instinctively guide those who are called upon to judge. Every man is a law unto himself, and both the chairman and secretary of the Daffodil committee must this season have voted Jacob a bit of a worry on this very point. I quite agree with Mr. Chapman on the need of a "definite pronouncement."

Secondly, now the season is over and there are no more groups to come *sub judice*, I would like to put forward certain considerations which must be taken into account, and to some extent settled, before any general consensus of opinion is possible. The difficulty is the same as that which confronted a certain Member of Parliament about the "minimum wage," who said, "My difficulty is not in saying that there should be a 'minimum wage,' but in saying what that 'minimum wage' should be." So say I of the standard of judging. There should be one, but what it should be is my difficulty. After much thought I have pretty well decided that it must be "the Golden Mean." I give a list in question form of points that must be considered and, if possible, answered:

(a) What is the purpose of a trade group at all? To expose wares for sale, old and new? or to make a grand bank of harmonious beauty either as an individual gem, shown, as it were, on a paper, apart from any setting, or as one among the many that together make the exhibition?

(b) How much to the good should new and rare blooms count?

(c) Which is better from the point of view of the public: a lot of old standard varieties that are purchasable by ordinary people, or some of the very latest out which are either unpurchasable or which must of necessity only be the specialist's flower?

(d) Which is the most attractive way to arrange individual vases, seeing the highly artificial surroundings of a British (in contradistinction to a Continental) show? "Hit-you-in-the-eye" or higgledy-piggledy?

(e) Should the separate excellence of each unit of the whole or the *tout ensemble* of the group weigh most?

And so on and so on. There are lots of other things that I could conjure up; but enough is as good as a feast, and I am sure I have given the most voracious appetite sufficient to digest at a single meal.

JOSEPH JACOB.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

Seedling Plants.—Young plants from seeds sown in February should be in excellent condition for potting, and if the suggestion to sow very thinly were adopted, the task will not prove in any sense a tedious or a difficult one. It will be found extremely easy to secure a capital ball of soil attached to the roots of each one, and that alone goes far to ensure success. The compost should consist largely of good loam. The addition of a little leaf-mould, however, is desirable, and coarse sand is essential to keep the soil sweet and open. It is necessary to water with more than ordinary care for a short time after the moving.

Sowing Seeds.—From some points of view at least, the month of April is the most favourable for seed-sowing, and no one, even with the most primitive of conveniences, should fail to raise splendid plants which will flower magnificently in the succeeding year. All the youngsters will not yield flowers of superlative merit; but the leading seed merchants who advertise in the pages of *THE GARDEN* have brought their strains to so remarkable a degree of perfection that the proportion of fine varieties is very high. Pans filled to within an inch of the rim are the best for the seeds, and the surface ought to be made firm and level prior to setting the seeds so widely that the necessity for thinning will be wholly obviated. A frame or a cool greenhouse will serve for the pans, and failing either of these structures, put the pan on a window-sill with a pane of glass over it; if the soil is kept pleasantly moist, satisfaction is certain to follow.

Planting.—Generally speaking, the planting out from frames will have been completed at the end of March, but April is none too late, especially in cold, low-lying districts. It is necessary to make the soil of the bed or border friable by the most thorough cultivation, and the desirability of incorporating crushed mortar or lime rubble freely cannot be questioned, while, if the ground is on the poor side, some well-rotted manure is required. In all circumstances I prefer cow-manure for Carnations and Picotees, and particularly so on light lands, but as far as this is concerned, the majority of amateurs have to use what

they can get and be proportionately thankful. However, it is most important that the planting shall not be delayed a moment longer than is absolutely necessary, as the plants will secure an infinitely better root-hold than if they are moved in May, when the soil has become really warm, and perhaps in some instances dry.

Established Plants.—Unless the conditions are peculiarly unfavourable, there can be no doubt that autumn planting is the best. Perhaps one ought to say summer planting, since August or early in September, immediately after the layers have produced an excellent set of roots, is the ideal time. By the spring the roots will be in perfect condition, and correct attention will preclude the possibility of failure. The surface of

Therefore I am not in favour of spreading it until the middle of May at the soonest, and if it is deferred until the end of that month, gain rather than loss will be the result. In the possible event of heavy rains following early application, it will be necessary to prick over the manure with a fork two or three times to prevent it from settling down into a close, wet mass.

F. R.

WORK AMONG THE CHRYSANTHEMUMS.

Young Plants that are healthy will grow very rapidly now, and much care must be taken with them to prevent weakly growth. It is a fact that hundreds of fine plants are spoiled at this season through neglect, but not wilful neglect. The cultivator sees his plants growing well in 3-inch pots and is content to watch them for a time; too long, as a rule, for their well-being. A 3-inch pot does not contain much soil, and when roots have been made freely the soil quickly dries, and, moreover, the nourishment in it is soon exhausted. Up to this stage the stem and leaves have grown to a fair size, and if the plant receives a check, the sap-vessels contract, the stem hardens and the leaves cease to swell as before.

In due course the plants are repotted and once more growth is active, but the cultivator will notice in after-days that both stem and leaves near the bottom of the plant are smaller than the stem and leaves higher up. Now, a well-grown plant must possess a thicker stem near its base than at the top, and the leaves should be correspondingly large. Do not be content to allow the young plants to remain too long in the smaller pots, but carefully and frequently examine their roots, and, directly the latter are sufficiently numerous in the pot, transfer them to a larger one, and thus keep every plant progressing. It is by picking out the plants in this way that the good health and general condition of the whole batch is maintained.

Early Feeding.—If through any cause the amateur cultivator cannot repot his plants when they need it, he should not hesitate to assist growth by judicious feeding. Some cultivators do not believe in feeding before the large

pots are full of roots. If necessary, feed at any stage of growth. It is better to feed a little than to allow a plant to deteriorate in health. All plants intended for conservatory decoration, or for the production of large specimen blooms either in groups or in a cut state at shows, should now be repotted in 5½-inch and 6½-inch pots without delay when there are sufficient roots in the old ball of soil to warrant it.

Cuttings Rooted in February should be placed in large 60 pots forthwith, and those propagated early in March must be transferred to small 60's without delay, thus keeping every batch steadily growing.



FLOWERING SHOOT OF SPARMANNIA AFRICANA, A USEFUL COOL GREENHOUSE PLANT.

the soil must be kept loose and open by persistent hoeing, or, if that operation is regarded as in any degree dangerous, by pointing lightly with a stick or small fork. This will encourage the admission of water and air, and conserve the food in the ground. The desirability of a surfacing of short manure cannot be questioned in the majority of soils, but it is commonly applied so early that the full benefits derivable from it are not secured. It should be utilised, not exclusively, as many people appear to suppose, to keep the soil warm, but to keep it cool, while at the same time providing a little readily available food for the plants.

The First "Break" : What It Is.—The first "break" is caused by the bud forming in the point of the shoot. This bud arrests the continued growth of the stem and main leaves on it, and, as a result, some tiny side shoots form near the point just below the bud. If three or four large blooms are required on a plant, the same number of young shoots are retained, and they, in turn, will bear buds which are called first-crown buds. A plant produces, naturally, a break early in the season; then a crown bud during the latter part of July, in August or the early part of September (according to the variety, whether it be early, medium or late); and, finally, a terminal bud, or cluster of buds, in September and October. Some varieties do best when early crowns are secured, others when late ones are "taken," so the cultivator must become well versed in the treatment of each variety, so as to get the very best flowers from each.

Varieties to Stop in April.—Few varieties show their first break in April, except the very early ones, and, when these do so, new shoots must be taken on and new buds allowed to form to cause a later break—say, in June—or, failing buds at that time, each plant must be stopped. In April the following varieties should be stopped and first crowns (in August) taken from them: Mrs. J. Thornton, Edith Jameson, Mme. Rivol, Mme. P. Radaelli, Hon. Mrs. Lopes and Captain Mitford. The first two named should be stopped early in the month, and the others near the end of it. The following varieties may also be stopped in the Northern Counties during the last week in April: Frank Payne, Mrs. W. Iggulden, Bessie Godfrey, Mrs. Charles Penford, Duchess of Sutherland and Master David. Chrysanthemum cultivators will be busy now and onwards. AVON.

THE GREENHOUSE.

FLOWERING PLANTS FOR THE WARM GREENHOUSE.

(TYDÆS.)

FOR some reason or other, Tydæas (or are they Isolomas?) have their merits very generally overlooked, as not only are they very beautiful when in flower, but their bright-coloured blossoms may be had throughout the greater part of the year. They are near relatives of the Gesneras, and, like most of this last-named genus, the underground system consists of curious caterpillar-like rhizomes. To get them in flower during the summer these rhizomes should be potted in February and brought on in the temperature of an intermediate house, where they will grow freely. Cuttings of the young shoots strike readily in a gentle bottom-heat, and the plants so obtained afford a succession to the earlier ones; in fact, in a temperature of 60° to 65° they will bloom more or less continuously throughout the winter and, given a little stimulus, with renewed energy in spring. The quaint markings of the flowers of many of them form a very noticeable feature. A selection of good varieties can be obtained at a cheap rate, especially when dormant, or seeds from a reliable source will give a good variety. The seeds must be treated like those of Gloxinias. Like most gesneraceous plants, a liberal amount of leaf-mould in the potting compost is very helpful to Tydæas in general.

H. P.

THE AFRICAN HEMP.

(SPARMANNIA AFRICANA.)

A FAVOURITE and easily-grown plant, the African Hemp is often seen in gardens, where it is grown for greenhouse and conservatory decoration. It is an arborescent shrub, often between 10 feet and 20 feet in height. The leaves are heart-shaped, soft and pubescent, not altogether unlike those of the common Lime, to which family it belongs. The flowers are very attractive; the petals are white and the stamens golden. April and May are, as a rule, the best flowering months; but this year the trusses of flowers have been produced earlier than usual. As a matter of botanical interest it is worth noting that the prominent stamens are sensitive to the touch. *Sparmannia africana* appears to thrive best in a compost of loam and peat. It may be increased from cuttings inserted in sandy peat under hand-lights or in a propagating-case, but this can only be

Although the difference in size between the two extreme forms is very great, they are connected in sequence by numerous intermediates so close that it would be difficult to define a line separating named varieties. The only justification for the varietal name given to the plant illustrated is that of colour. It is the first form of this species that I have seen which has departed from the typical beautiful white which is characteristic of it. It is called *S. burseriana elegans*, and has bright rose-coloured buds and pale lilac flowers; otherwise it is in every respect identical with intermediate forms in foliage and habit. This plant appeared among a batch of seedlings raised from seed saved from *S. burseriana macrantha*. It may be merely a sport, but it is more probable that one of the red-flowered species had some influence, in that the flowers of the seed-bearing plant may have been cross-fertilised by some insect.

As may be seen by the illustration, it is a free-flowering plant as well as a vigorous grower,



THE RARE SAXIFRAGA BURSERIANA ELEGANS WITH ROSE-COLOURED BUDS AND PALE LILAC FLOWERS.

successfully carried out under glass where bottom-heat is at command.

being larger than any other in the same batch of seedlings. W. I.

THE ROCK AND WATER GARDEN.

A ROSE-FLOWERED FORM OF SAXIFRAGA BURSERIANA.

THE beautiful *Saxifraga burseriana* is a most variable plant, and this fact has been the incentive which has given rise recently to such a number of named varieties, such as *grandiflora*, *Gloria magna*, *speciosa* and *tridentina*, all slight variations from *S. burseriana major*, which was sent out, I think, by Mr. Selfe Leonard from the Guildford Hardy Plant Nursery many years ago. Besides the size of flower there is also much variation in the time of flowering, and, speaking generally, the larger forms seem to come into flower earliest, while *S. b. minor* is one of the latest in bloom.

A BEAUTIFUL ROCK GARDEN PRIMROSE.

(PRIMULA FRONDOSA.)

ONE of the most dainty and charming of the Primulas which favour us with their blossoms during April is *P. frondosa*. It is really delightful to see a colony of these diminutive plants nestling under the lee of some brownish-coloured stone, which accentuates the brightness of the rosy flowers and soft green leaves, while here and there, where the backs of the leaves are exposed to our view, they gleam in their vivid whiteness, owing to a heavy deposit of farina thereon. In general aspect this Primula is very similar to *P. farinosa*, except that it is larger and more robust. The leaves, too, are broader than in its smaller relative. The chief advantage it has, at least with me, is that it is a much better perennial. As a rule, no matter what treatment I give it, *P. farinosa* is little more than a biennial, but *P. frondosa* is

much more reliable in this respect, and may be divided after flowering.

It is well, to raise it from seed every few years, and so introduce that vigour which almost invariably accompanies seedling plants. As in the case of the Bird's-eye Primrose, *P. frondosa* dies down to a farina-covered bud in the late autumn, and so remains, usually till mid-March, when it opens and rapidly develops, throwing up its farina-covered stalk, bearing a truss of dainty star-like pink flowers, in a surprisingly short time. With me it thrives in a fairly moist vegetable soil, with loam, sand and grit added, while I generally place about the plants pieces of sandstone half buried in the earth to prevent too rapid evaporation.

As with *P. farinosa*, though in this case in a lessened degree, the frost is much inclined to lift the plants from the soil, and when the thaw comes it is well to go over the plants and gently press them down, if necessary adding a little more soil.

NOTES ON TULIPS.

TULIPS AT THE ROYAL HORTICULTURAL SOCIETY'S SPRING SHOWS.

AT the Forced Bulb Show there was but little novel to chronicle in the way of Tulips. Two fairly new ones, *De Wet* and *Alice Roosevelt*, came before the committee for awards, but without result. *De Wet* is a lovely orange sport from *Prince of Austria*, retaining the same graceful habit and shape of flower. It had already received an award of merit. Some day, when in rather better condition, it may receive the coveted "step." The *Prince*, its other self, is the Tulip I would choose to live with if my choice were to be confined to one variety, just as I think the *Raspberry* would be the one among the fruits—fresh Raspberries, Raspberries and

the variegated-leaved *Yellow Prince*? Here, too, the colours blend.

The premier award of the day—a silver-gilt Banksian medal—went to the large group of Messrs. R. and G. Cuthbert of Southgate, which filled almost the entire end of the hall. The flowers were arranged in more or less round little groups on the floor; but to me the whole effect was too bizarre, and the pots sadly wanted covering with Moss or Fern. All the same, the public owe the firm a debt of gratitude for the helpful display of so many varieties. Where would the show have been without this exhibit? I noticed among those in the best condition *Trilby*, a delicate and slender edition of *Brunhilde* (Unique); *Vermilion Brilliant*, the brightest and best red for pots; *Couleur Cardinal*, the magnificent rich crimson outdoor midseason variety, which I find comes nicely in pots slowly brought on.

On March 19 this firm staged a collection of Darwin and Cottage varieties. Speaking from my own personal experience in growing them and from what I see elsewhere, I do not think these latter, as a whole, lend themselves to pot culture under glass. I was, however, impressed with a lovely pale biscuit brown variety called *Clio*. It looked well and retained its shape, and carried its flowers on good stems. *Fairy Queen* was good, too, and the colour shades of mauve, pale pink and yellow were blended in delicate gradations. There were several good Darwins that could be picked out, such as *Pride of Haarlem*, *William Copeland* and *Rev. H. Ewbank*. We hardly as yet appreciate the value of this latter type for mild forcing.

It is significant that a very large firm indeed of market-growers who force the early sorts by the million (fact, not writer's romance) are only now beginning to test the different kinds with a view to going in for them in large quantities. One thing they will find, and as it is a thing which private growers should realise, too, I mention it, viz., that to get the *very best* results, none but the largest and best-ripened bulbs should be used. Some day perhaps we will find retail traders advertising such specially-prepared stuff, and if they

do, it will be worth a little extra, and the purchaser will be repaid by the extra pleasure that their fine large blooms will give him.

On April 2 Messrs. Cuthbert and Sons occupied their old position of March 6 at the end of the hall, and put up a similar collection of Darwin and Cottage varieties to that of the March 19 show. Tulip-lovers owe a debt of gratitude to this firm for these several exhibitions. They are very educative, especially as the plants are shown as grown. The improvement in strength on the second time of asking was very noticeable. This leads me to suggest that there is a time when these pot plants are at their best under glass. Every grower should experiment for himself to find out those two or three weeks when one can catch them in this condition—that psychological period when the stems can be had at their full strength and before the sun has too much power, so that there will not be that flagging of leaves



AN EFFECTIVE GROUPING OF PRIMULA FRONDOSA IN THE ROCK GARDEN.

I have often wondered to what extent this tendency to grow out of the soil (so frequently seen in these two *Primulas*, and also, though in a modified way, in the *Soldanellas*) may be a natural method of preparing themselves for the fresh deposit of humus which, in the mountains, is brought down by the melting snow-water. Often in the Alps one finds such little plants almost buried by this accumulation. It is quite a common experience in my garden, and probably in others, to see *P. rosea* grow out of the ground to a surprising degree, sometimes as much as 1½ inches, and supported on a cone-like arrangement of roots; and often so rigid are they in that elevated position that they are not to be coaxed back into the soil, as is so easily done with *P. farinosa* and *P. frondosa*. When in this state they seem to greatly benefit by a top-dressing of leafy soil, though exactly the same thing occurs the following year.

REGINALD A. MALBY.

maraschino, Raspberry jam, bottled Raspberries, Raspberry vinegar, Raspberry jelly, sauce Melba, and possibly other nice things that Mrs. Earle of "pot-pourri" fame or Miss Jekyll of "colour effects" renown could tell us of.

Alice Roosevelt is, I believe, a sport of *Queen of the Netherlands*, with the drawbacks of that lovely variety. Its charm and its novelty lie in its real pink colouring. Another fairly new Tulip was *Brilliant Star*, an almost *Vermilion Brilliant* red, nearly the exact colour of scarlet *Duc Van Thol*, with a yellow and brown base. I have grown it myself this year, and it is a "good thing." A bowl of the variegated-leaved *Royal Silver* (*Silver Standard*) in Messrs. Carter Page and Co.'s group in one of the annexes took my eye. I do not often like the combination of bright flowers and variegated leaves in anything, but in this case they harmonised, and I have put it down for trial next year. By the way, do readers know

and spread-eagling of blooms which are, from the point of view of the looker's-on, so exhaustive. I felt I must make these little digressions while they were in my mind. Little things are big things in gardening, if they are anywhere. I made a note of a good many of those in the best condition on the Highgate firm's stand, and what they have done we can do; hence the value of my list. Velvet Queen, a monster reddish purple, much enquired for during the afternoon; Leonardi de Vinci, a reliable dark maroon; Remembrance, a long, pale dusty purple and mauve; Suzon, exterior blush, interior deep pink, and the style of the better-known Margaret; Mrs. Farncombe Sanders, grand large rose red; Lucifer, shades of reddish orange, reminding one of Thomas Moore, the favourite early; Carl Becker, a new one to me, with long-shaped flowers of a buff-toned pink; Fairy, a large, dull red orange shade, distinct and good; Psyche, pale rosy pink; and although not strictly a Darwin, Feu Ardente, a tall, handsome dark red which lasts particularly well.

A special word for a little lot of fibre-grown plants on Messrs. Bath's stand. I have seldom, if ever, seen better-grown "stuff" anywhere. The varieties were Isis, Pride of Haarlem, King Harold, Bartigon, Nora Ware, Clara Butt, Mme. Krelage, Maiden's Blush and William Copeland.

At this same show Messrs. Cutbush and Co. had a large number of single and double "earlies" in pots. President Taft was a large white flushed and picoteed with rosy pink, very much after the style of the Cottage "Picotee." Cardinal Rompolla was another new one. Brutus is not so often grown as it deserves to be. It has crimson petals edged with orange, and is quite distinct from either Duchess of Parma or Keizerskroon.

JOSEPH JACOB.

ROSE GARDEN.

NEW ROSE MRS. E. ALFORD.

ON this page appears an illustration of the new Rose Mrs. E. Alford, which received an award of merit when

shown by Messrs. Lowe and Shawyer at a recent meeting of the Royal Horticultural Society. It belongs to the Hybrid Tea section, and as a forcing Rose it has many good points. In describing it we cannot do better than reiterate the notes which appeared in a recent issue of *THE GARDEN*: "If we say at once that in this new-comer appears the embodiment of the best attributes of Mme. Abel Chatenay and La France—we know nothing of its parentage, by the way—the reader will get an idea of its distinctive beauty. There are the well-rolled recurving petals of both of these, wedded to a longer and more pointed flower, such as Mrs. G. Shawyer. In the main the

colour leans to a rather pale Mme. Abel Chatenay, but the flowers are handsome and well set up on firm, bold stems. The variety is nicely scented."

SEASONABLE WORK AMONG THE ROSES.

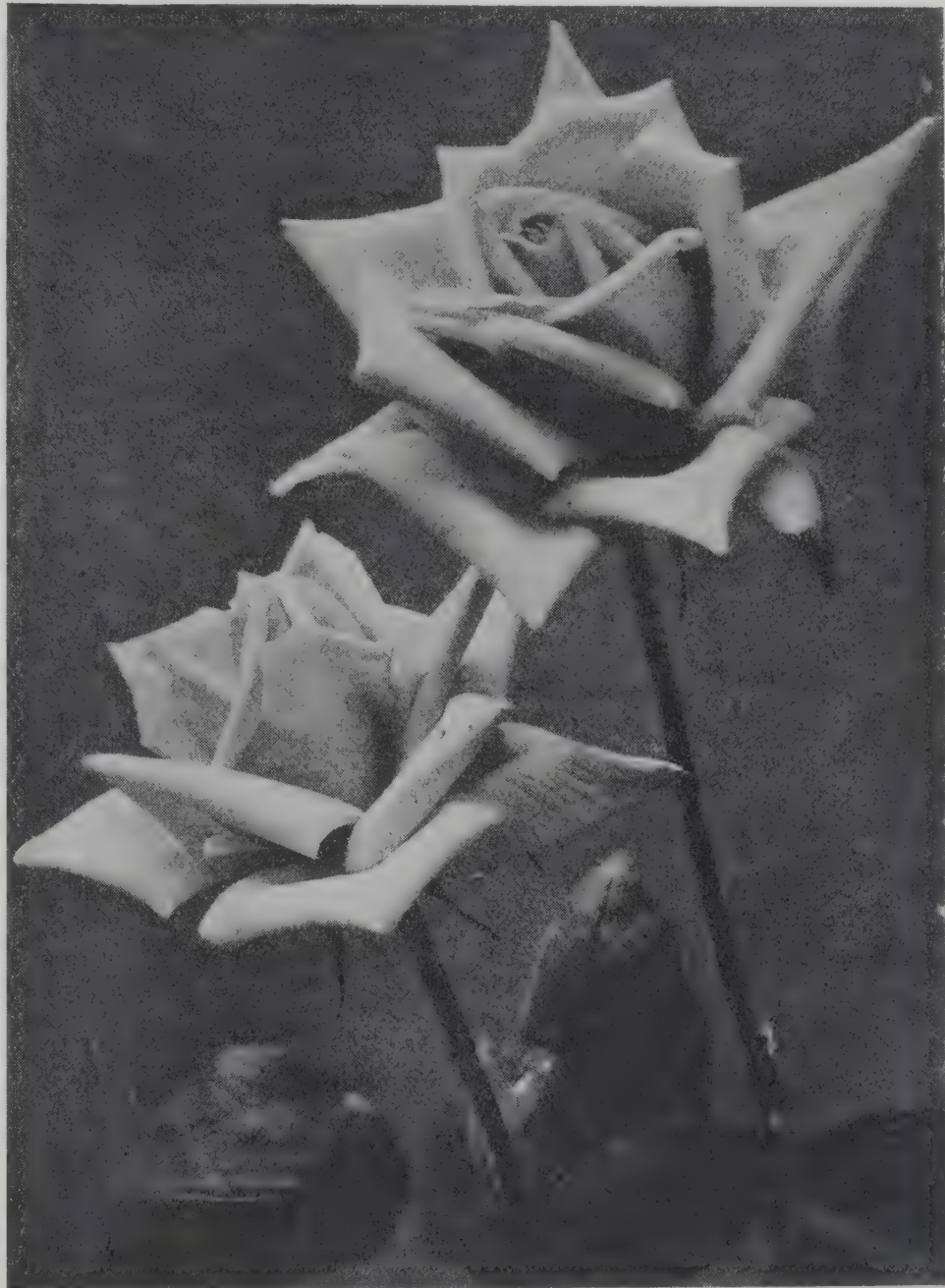
THE few warmer days, together with greater sun influence, have advanced growth rapidly. I note this especially among the Hybrid Sweet Briars, whose fragrance is very grateful so early in the spring. Some of my own, in a sheltered corner, have been sweet since the middle of March. The growth upon wall Roses, and in some other warm spots, is already forward enough to carry visible buds, and is quite thickly infested with green fly. Mildew has also appeared upon some precocious

Buds, both upon dwarfs and standards, inserted last summer are already pushing up freely. Simultaneous with these we naturally have suckers and side stem growths upon standards. The sooner these can be cut out the better. Their removal is more easy and expeditious when quite young, and they can also be cut out entirely without so large a wound being made.

In the case of standards budded last summer, I would not cut away all of the few eyes that may be growing upon the short portion of shoulder left beyond the Rose-bud. If one eye is left to grow and the point pinched out later, I think it encourages a better flow of sap towards the Rose-bud. When this last has made a good start is the best time to cut away the Briar growth beyond it. This does not apply to dwarfs, for here the whole of the sap from the roots must necessarily come to the bud, having no other outlet.

About the end of the month a little artificial manure may be sprinkled on the soil near to the young Roses, and when the ground is in a suitable condition some of the soil should be drawn up towards the growing bud. In the case of a few plants only, I would place a little well-prepared soil around the base of the buds previous to drawing the surrounding earth to them. This earthing-up assists a better and more uniform swelling of stock and Rose, which naturally conduces to a sounder connection. May should be a very busy month among all classes of Roses in the open.

A. P.



THE NEW HYBRID TEA ROSE MRS. E. ALFORD.

TREES & SHRUBS.

YEW FOR GARDEN EFFECT.

IT is astonishing to find how few of the various species of Yews are generally known and planted. The effective value of a collection is very great, especially during the dull months, when they stand, as it were, more prominent to observers. Yews were largely planted years ago, especially in the vicinity of mansions and churches for boundaries. They are most useful for keeping away strong winds, and are as good a protection as a wall and far more ornamental. At Compton Bassett in Wiltshire

there are some enormous hedges as wide over the top as a load of hay, and these are so dense that the men when clipping can walk about on the top. These are on the chalk soil, and have been planted many years. Most of the *Taxus* family are hardy, and therefore should have suitable positions. I give now some good forms.

***Taxus baccata*.**—It is said that the timber of this species is most useful, but takes a long time to dry after being cut, and very little shrinkage is ever observed. Its uses are for very fine tables, and is acknowledged by authorities to be the best wood for cabinets, making better articles than those of mahogany. In Denmark it is said

growth. Both of these enemies can be fought with the usual summer insecticides, which we can seldom use too early after young growth commences. Prompt measures are of the greatest service, and often stay severe attacks that would injure, if they did not entirely spoil, any prospect of early bloom.

Upon more than one occasion I have cut Roses from a warm wall by the end of April. Mme. Falcot, Rêve d'Or, Gloire de Dijon and Charles Lawson often come extra early in such a position. This is generally where little pruning has been done and during a season when the young growths have been fortunate enough to escape frost.

to grow from 30 feet to 40 feet. The tree is found all over Britain and the greater part of the Continent of Europe.

T. b. depressa.—This is a low, spreading tree, more after the manner of a shrub.

T. b. fastigiata.—Trees of this are always recognised by their upright, column-like growth, and are exceptionally fine when the trees are large. They are apt to spread, but this can easily be rectified by wiring them round about a third of their height.

T. b. aurea (the Golden Yew).—This is very interesting when grown with the green forms.

T. nana (Foxii).—This, the dwarf Yew, rarely grows more than 3 feet high.

T. cuspidata (the Japanese Yew).—This grows to a large size and is more after the style of the common Yew, though the leaves are broader and more abruptly pointed.

T. brevifolia (the Californian Yew).—This is of very open growth, and its foliage is lighter and more feathery than our common Yew. The habit is very distinct. The branches grow as fast in length as the leader increases in height.

Cephalotaxus Drupacea.—This is a straggling shrub, but evergreen and of much interest. It is sometimes called the Plum-fruited Yew. This comes from China and Japan.

C. Fortunei.—This has the finest foliage of all the species. The leaves, when well grown, are about three inches long.

C. pedunculata.—This is a choice evergreen, and ought to be planted with the two former for comparison. The leaves of this variety are 1 inch to 2 inches long, bright green above, with two broad, glaucous lines beneath.

Torreya (the Fetid Yew).—This is a genus of evergreen trees which have not been very generally taken up in Great Britain, probably on account of being such slow growers; but the reason may not be far to seek. As is the case with many choice evergreen shrubs, they may have been raised from cuttings, when, as is well known, they develop a branching habit instead of going upwards. The young foliage of these trees when bruised emits a disagreeable odour; hence their name the Fetid Yew. *T. grandis*, *T. Myristica* and *T. nucifera* are the species usually grown in botanical collections.

Saxegothea conspicua (Prince Albert's Yew).—This is seen in collections in sheltered localities and is a very interesting shrub, a low tree with spreading branches, densely clothed with foliage of a lighter green than our common Yew; it grows from 20 feet to 25 feet high.

Prumnopitys elegans.—An ornamental tree and very distinct. Its popular name is the Plum-fruited Yew of Chili. This has proved hardy

in many places in Great Britain and grows fast in some districts.

Podocarpus.—This genus includes an unknown number of species. These are distinguished by the leathery deep green leaves, which in most cases of the species are linear.

P. alpinus.—This grows 10 feet high on the Australian Alps in Victoria, and in Tasmania.

P. chilina.—This grows much more rampantly and from 40 feet to 60 feet. The leaves of this are 2 inches to 3 inches long, deep green, and very shiny and glossy.

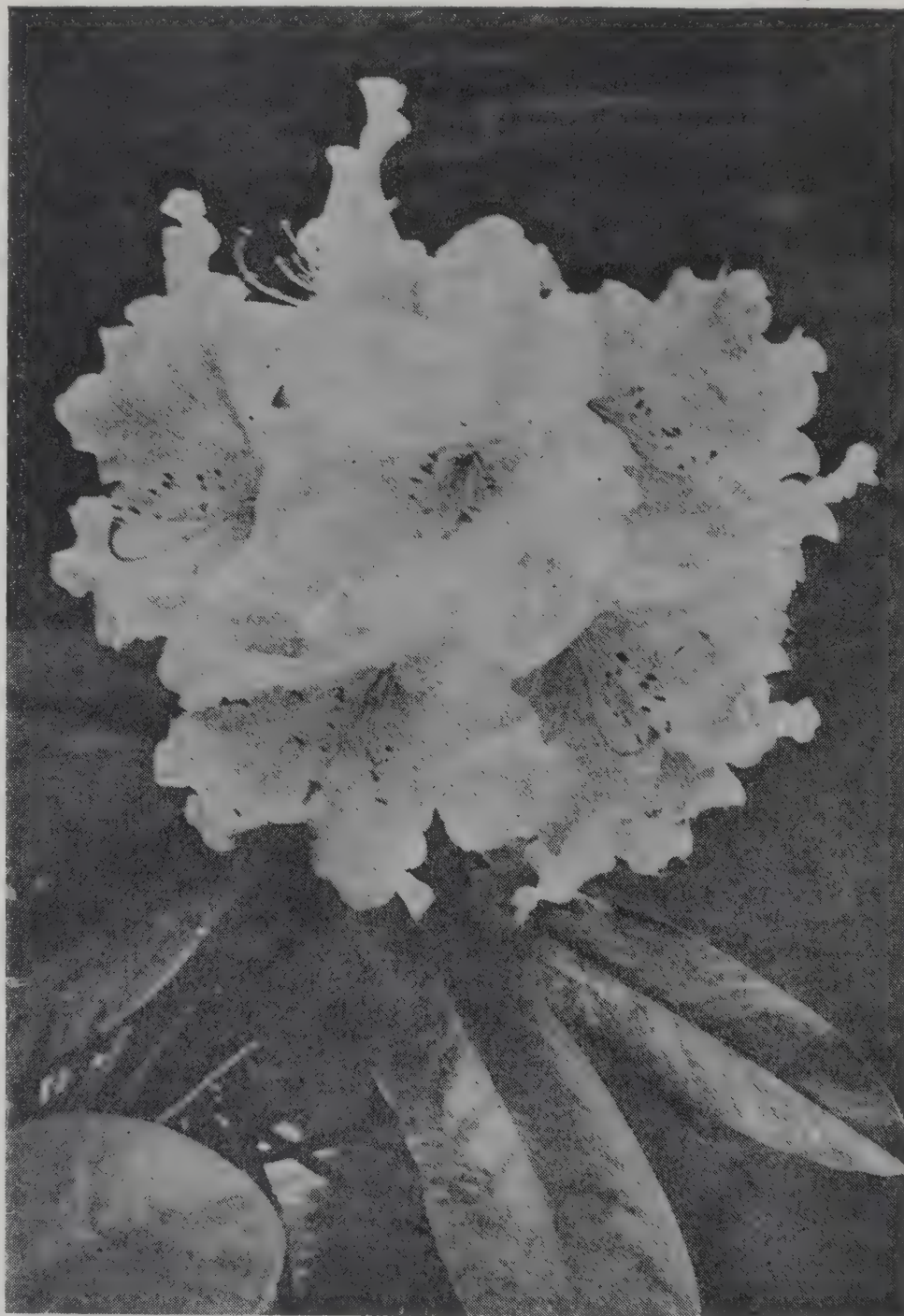
remind one of the *Arbor-vitæ*. The timber is said to be close-grained, durable and aromatic. There is a good plant here which has stood some twelve years, so that it has proved hardy. It is quite distinct.

Cut Yew.—Those who like to see the fantastic peculiarities of animals and birds on their Yew should grow the common Yew or *Taxus baccata*, *adpressa*, and get shapes made of wire or Bamboo for the training of the branches to the form required. After having secured the shapes, simply tie in the growths. As soon as the desired end is obtained, keep in character with a pair of shears.

Most of the species and varieties mentioned are grown in these gardens.

W. A. COOK.

Leonardslee Gardens, Horsham.



FLOWERING BRANCH OF RHODODENDRON ISABELLA MANGLES, A BEAUTIFUL VARIETY WITH ROSE PINK BLOSSOMS.

P. macrophyllus.—This is a beautiful distinct evergreen, with numerous branches, which are clothed with pale green leaves 3 inches to 4 inches long, tapering at the base and pointed at the apex. Where it does well it is extremely beautiful. It requires shelter from cold, cutting winds.

Daerydium Franklinii.—This is one of the most beautiful shrubs, and sometimes called the Huon Pine of Tasmania, where it attains a height of 100 feet. The branches are rather short and grow horizontally from the trunk, but the extremes are slightly pendulous. The scale-like leaves

veteran raiser. The parentage of this variety is not known with any degree of certainty, but it is probably a cross from some garden form of *R. arboreum* and *R. Aucklandii*. True to the characteristics of *Aucklandii* hybrids, it is early to flower, and on this account is liable to injury if grown outdoors, except in congenial places, as in the South and West of England. The trusses of flowers are remarkable for their size. In colour it is not unlike the renowned Pink Pearl. It is a soft pink, without the least suspicion of purple, even as the flowers age.

RHODODENDRON

ISABELLA MANGLES.

This is a variety of exquisite form and colour that will unquestionably be widely grown when better known. It was raised by the late Mr. H. J. Mangles of Haslemere, and it is one of the greatest triumphs of that

GARDENING FOR BEGINNERS.

AURICULAS: HOW TO REPOT AND TAKE OFFSETS.

MANY years have passed since Auriculas first attracted attention, and during this long period numerous growers have done all they possibly could to improve their favourite flower. Among them are Douglas, Ben Simonite (a Sheffield working cutler), the Rev. F. D. Horner, the Lancashire weavers and a host of others. The Auricula is an amateur's plant in the truest sense of the word. Once the amateur makes a start, he will not be content with just growing them, but will begin to raise seedlings, although one must be prepared to flower a large percentage of plants which will be inferior to those already in commerce. This part of the subject was discussed a few weeks ago in *THE GARDEN*, and we are now chiefly concerned with the repotting and increasing the stock by means of offsets.

The Potting Compost.—In the old days the frames were specially constructed, and there was always a certain amount of mystery about the compost; but now we know that Auriculas can be successfully cultivated if given ordinary attention and never coddled. A suitable rooting medium consists of good decayed fibrous loam three parts, and one part leaf-mould, with just a sprinkling of rotten cow-manure. Auriculas must never be overpotted. A receptacle just large enough to comfortably take the roots should be

the rule, and the pot filled one-fourth of its depth with drainage.

How to Repot.

During the month of April the majority will be in flower, and as they pass out of bloom repotting may commence. The first illustration shows a specimen ready for treatment and a number of offsets which can be taken off and placed in a pot, as depicted in Fig. 2. After taking away the offsets, a portion of the old soil should also be removed, and where any clusters of the woolly aphid exist, it will be necessary to sprinkle

the affected parts with Tobacco powder. The bottom of the tap-root ought to be examined, and where it has begun to go rotten, a little powdered charcoal can be applied after the decayed portion is cut away. When the repotting is finished, arrange the plants in a cool frame, preferably one with a north aspect, and only give enough water to keep the foliage from dropping; but as the roots take possession of the soil, more water can be given, although at no time will the Auricula tolerate a wet, stagnant compost about the base.

General Treatment.—Throughout the summer months admit plenty of air; indeed, the lights can be pulled off at night whenever the weather is fine, while, should green fly make its appearance, the structure must be vaporised at once. This not only destroys the green fly, but will kill the woolly aphid that may be around the plant. As winter approaches, the supply of water ought to be less, and when giving water none should be allowed to lodge in the crown of the plant, while, of course, drip from the frame must also be guarded against. All dead leaves should be carefully removed, ample fresh air admitted, and the plants kept just on the dry side; then very little harm will accrue during the winter months.

Taking Offsets.—In the second illustration are shown some offsets. These are taken off in February and August, also when the plants are repotted. Some varieties produce offsets freely, particularly the alpine section; but the show forms are, as a rule, shy in this respect, and with choice Auriculas an offset can be removed at any time. It is advisable to take off an offset



2.—OFFSETS REMOVED AND POTTED UP.



1.—PLANT READY FOR REPOTTING, SHOWING OFFSETS WHICH MAY BE TAKEN OFF NOW.

with a little root attached, wherever possible, when it can be placed singly in a 2½-inch pot; but it is not by any means essential for the offsets to be rooted prior to removal. When they are cut off in this condition, several may be arranged around the edge of a pot, as seen in Fig. 2, and if put in a hand-light and kept shaded from strong sunlight, they will soon form roots, when they can be potted separately and treated as older specimens. Some would have us believe that there are many secrets in Auricula culture; but this is entirely erroneous, and if a few simple details are observed, such as careful watering—the plants ought never to be dust dry or excessively wet—freedom from insect foes and a sweet, wholesome rooting medium, success will be assured, and the grower will be rewarded with a set of plants which are second to no florists' flower in beauty and refinement. S.

JERUSALEM ARTICHOKE.

Planting Tubers.—It is very rare indeed that this useful vegetable is cultivated as well as it deserves to be. If we experience a bad winter for green crops and are able to put by a good stock of Artichoke tubers, the shortage of vegetables is not so keenly felt in the household. The Jerusalem Artichoke will grow in almost any kind of soil and in nearly every part of a garden. On this account it is usually allotted an odd corner where the soil is poor and but indifferently tilled, with the result that the crop is a poor one, the largest tubers at the end of the year being no bigger than those used for seed purposes. Plant at once in friable soil. The position ought to be an open one, not under the branches of trees nor too near high walls. The soil must be trenched to a depth of 30 inches and some well-rotted manure thoroughly mixed with it. Then the tubers should be planted 1 foot to 18 inches apart in rows 3 feet asunder and buried 6 inches deep. So treated, satisfactory results will be obtained. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Flower Garden.

Phloxes.—The varieties of the *P. decussata* type that have remained in the open ground through the winter will produce finer trusses of flower if the weakest shoots are removed, allowing five or six of the best to mature.

Cuttings.—Where these have been taken off in the early part of the year and rooted on mild hot-beds, the young plants will now be ready for transferring to the open border. Plant in threes triangularly.

Michaelmas Daisies.—Avoid overcrowding of the growths. Five or six staked singly will suffice. When treated thus, the habit of the plant is seen to perfection. When the growths are about 6 inches high, staking is best carried out.

Staking.—This with many subjects, in my opinion, is left too late, and support is given after the plant has suffered from the effects of the wind. Do not delay longer than is absolutely necessary, and place suitable supports of sufficient thickness. Always endeavour to carry out the work neatly but efficiently, bearing in mind also the approximate height the plant will attain.

Pampas Grass (*Cortaderia argentea*).—The established clumps of this elegant subject for lawns, borders and the like will now need trimming previous to recommencing growth. Cut away the old inflorescences and trim the foliage with a pair of shears. Replanting is best carried out now. Make the soil as rich and holding as possible. This plant succeeds well near to the water's edge, and also bears division well.

Gunneras.—If the winter protection has been removed, temporary shelter must be afforded the plants in the event of late frosts, otherwise the young leaves will be injured.

Water-side Plants.—Such plants as *Phragmites*, *Typhas*, *Carex*, and *Miscanthus*, should have the old foliage cut down without delay.

Mina lobata.—This is a pretty and interesting half-hardy annual climber, and easily raised from seed, which, if sown at once singly in small pots, will produce good plants for placing out of doors in June.

Ecermocarpos scaber.—For quickly covering a sheltered position this is an invaluable climber, and when well established often proves hardy. Seed may be sown at once as advised for the foregoing subject.

Plants Under Glass.

Primulas.—A sowing may now be made for providing a display in the late autumn. Sow the seed thinly on fine soil in well-drained pots or pans, and cover with a sheet of glass and then with a sheet of paper. Place in a warm house until germinated. The numerous varieties now to be had of the *P. sinensis* type and variety *stellata* in such exquisite colours has done much to popularise them for greenhouse decoration.

Auriculas.—The plants as the flower-spikes extend may be removed from the frames to the greenhouse. Neatly support the truss with a thin piece of stick or other material.

Palms.—These may be, when rooting freely, occasionally watered with properly-diluted farm-yard manure and soot-water, which will tend to darken the leaves. Keep them well syringed at least twice daily, and afford plenty of shade. Take every precaution when sponging to preserve the leaves from injury.

Exacum affine.—Sow the seed at once for producing nice plants to flower in late summer and autumn of this free-flowering pretty blue greenhouse plant. Raise the seed in heat and pot off early into small pots. Keep growing on sturdily.

Gladiolus Colvillei albus (The Bride).—We grow numbers in 5-inch pots, and these are extremely useful now for flowering in the greenhouse. Until introduced keep the plants in a cold frame. Water occasionally with liquid manure-water, and place a few supports to the growth.

Sparmannia africana.—This is a free-growing old greenhouse favourite in many places. If the

pots are filled with roots, water liberally, and occasionally use stimulants.

The Kitchen Garden.

Peas.—If the seed has been sown in boxes as recommended for the earliest sowings and raised in a cold frame, plant out the seedlings as soon as these are large enough. Stick the plants at once and protect from the birds.

Sowing Seed.—Sow seed of good Marrowfat varieties for midseason supplies in the open ground. If mice are a pest, steep the seeds in a thin mixture of red lead and water. Either place guards or protect from the birds by stretching black cotton over the rows.

Turnips.—As soon as practicable, thin out the seedlings and run the Dutch hoe between the rows.

Hoeing.—The value of the use of the Dutch hoe between crops cannot be overestimated at this season of the year, as not only does it check the growth of all weed-life when in a young state, but it also aerates the soil and does much to stimulate growth.

Lettuces.—Make occasional sowings of whichever variety is most esteemed. Continue to plant out any seedlings from boxes or frames. Place black cotton over the young plants.

Salsify.—Make a small sowing at once in a piece of ground such as one would select for Carrots. Sow the seed thinly in shallow drills, and thin out the seedlings when large enough to 1 foot apart.

Hardy Fruit Garden.

Protect whenever possible against late spring frosts. As soon as the protective material is done with, dry it thoroughly and put it away.

Alpine Strawberries.—If seed was sown as advised, the seedlings will be ready for transferring to boxes or a shallow frame. Prick out 2 inches apart.

Early Strawberry-Beds.—If a few early fruits are desired, a temporary framework erected over the beds, with means for drawing over tiffany or placing lights on, will help to forward the fruit.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Fruit-Houses.

Peaches.—The late trees will be advanced enough for the fruit to be thinned, and probably some of the shoots will need tying. Do not be deceived with extra strong growths, but rub them off. They are worse than useless. Syringe regularly twice daily.

Pot Fruit Trees.—These are largely grown in private gardens, and at this period, if the weather be at all genial and bright, the water-pot will be much in use. Over-watering, however, is to be feared. A sharp look-out must be kept for the first appearance of aphid; once it becomes established it is only eradicated by unintermitting attention.

Vineries.—Vines in all stages of growth call for constant attention to the removing of superfluous growths. I allow no leaves to form but the primary one on the laterals, all other growth being rubbed off. This not only saves a lot of labour were the growths permitted to extend several inches before removal, but it benefits the Vines, and insect pests are much easier to keep down should they appear.

The Kitchen Garden.

Celery.—The latest should now be ready to prick out, as advised for the early sowing.

Potatoes.—The points of the earlies which peep above ground should have some dry soil banked over them as a protection against morning frosts, and those in the main quarters surface-hoed to destroy any seedling weeds which appear at this time. There is no fear of cutting the tops of the Potato growths meanwhile.

Lettuces.—Early-raised plants in frames will be growing apace, and as they grow will need much water, which must be carefully run in between the rows of the plants, in order that the lower

leaves of the Lettuces are neither stained nor what is worse, rotted. Those sown in a frame four or five weeks ago will be ready to transplant in lines in the kitchen garden. They do well on the ridges between the trenches prepared for Celery.

Early Peas.—Dwarf varieties should have some pieces of dead Spruce or other suitable material stuck in along each side of the rows to keep the plants, when they begin to pod, from falling over. If no supporting material is available, draw some earth to the haulm as a substitute. Thoroughly stir the soil between the rows.

Early Carrots.—If these are to be thinned, let it be done at once, so that those left are not disturbed. As a rule it is not essential to thin this crop, provided the seed was not thickly sown and the drills were drawn wide rather than deep. Begin drawing the roots while yet small, and those left will grow into quite usable stuff.

The Plant-Houses.

Seedlings.—It is imperative that seedlings of both stove and greenhouse plants shall be pricked out while yet small.

Camellias.—These submit to the knife without showing dislike in subsequent growth; therefore, now that the bloom is past, cut back any shoots that have grown out of proportion, those that are misplaced or near the centre of the bushes, and dead portions, cutting these into the live wood. Occasional syringing with hot soapy water keeps them clean. Surface the borders with any suitable manure or compost.

Cantua dependens.—Though not much cultivated now, this almost hardy South American shrub is well worth the attention of those with large conservatories to furnish. It is rather susceptible to the attack of red spider, and now that the plant is about to open its waxy flowers it should be powerfully syringed with warm soapy water or a good insecticide to prevent their appearance while in flower.

Perpetual-flowering Carnations.—Autumn-struck plants in 5-inch pots should now be ready for a shift into others two sizes larger, and those of the January batch in 3½-inch or 4-inch pots at a like stage of forwardness also repotted. There should be abundance of bloom on flowering plants, and there is no reason why they should not be utilised to furnish the conservatory and do duty as house plants at this season, of course reserving those intended to be grown on for another year, and which provide the autumnal supply of cuttings. It is hardly necessary to remark that young plants must be grown altogether under glass in the North with abundant ventilation.

The Flower Garden.

Herbaceous Borders.—Before growth becomes too close, these should be surface-dressed with some material which will stimulate growth without developing coarseness. Then hoe the exposed surface and clean away decaying vegetation, if any.

Spiraea Van Houttei affords some of the most precious material for cutting during early spring the tender green of the foliage being unapproached. To have long, straight wands it is essential to sacrifice the bloom of at least some of the plants, and now is the time to severely cut them back.

Forsythia suspensa.—This also is at the stage to prune where the plant is allowed to flower on the summer-made shoots, and if trained to a wall the old shoots should at the same time be made secure. Plants spur-pruned in autumn only require a rearrangement of the shoots at this time, re-nailing if that is needed. This is not a usual method of treating this handsome shrub, but it is a perfectly good one.

Violets.—The old plants have now finished flowering, and new plantations should be formed without delay. Ours are all grown at the base of south and west walls, and need to be renewed from rooted runners every second year. Owing to being grown on the same ground, it is essential that a heavy dressing of decayed cow-manure be dug in, and fertilisers applied once the plants are established. Though the foliage was destroyed by the drought last summer, a surface-dressing brought the plants round, and there has been a profusion of fine, long-stalked flowers.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

NURSERY NOTES.

THE RISE OF THE PERPETUAL-FLOWERING CARNATION.

THOSE who have only a superficial knowledge of the extent to which the Perpetual-flowering Carnation is grown in this country would be very greatly astounded could they visit one of the several big establishments that have during recent years sprung into being. We recently had the pleasure of spending a few hours with Mr. A. F. Dutton at his nurseries, which are situated at Iver, Bucks, a charming village lying between Uxbridge and Langley. Not only does Mr. Dutton grow enormous quantities of plants for providing cut blooms for market, but he also propagates, on a most extraordinary scale, all the best-known varieties for providing plants for his rapidly-increasing host of customers.

To give our readers some idea of the demand which exists for plants of these Carnations, we may mention that from November till March inclusive one house is given over entirely to propagation, which is effected by means of cuttings. This house accommodates 50,000 cuttings, and the work is so arranged that a third is emptied each week. This means that the cuttings take three weeks to root sufficiently well for potting off into 2½-inch pots. A simple sum in arithmetic will show that Perpetual-flowering Carnations are rooted here at the rate of 50,000 every three weeks over practically six months of the year! The process of propagation is most fascinating. Deep beds of sand are placed on raised stages, and after the cuttings have had a few of their basal leaves removed, as well as the tips of the long, upper ones, they are inserted about an inch deep in the sand, given a light overhead watering, and then kept fairly close until roots have been formed. Naturally, every care is taken to prevent these youthful plants becoming drawn and weakened.

The ease with which these Carnations can be grown in quite cool greenhouses is, no doubt, responsible for the huge demand for plants that Mr. Dutton has to meet. Nor can they be regarded as expensive to buy. At the time of our visit in mid-March Mr. Dutton had several thousands of splendid plants in 5-inch pots, many of them carrying three or four well-developed flower-buds, and these he was, and is still, offering at a very low price. Plants of this size will continue to flower right through the summer and well into the winter, especially if potted on into 9-inch pots; hence a few dozen would be an excellent investment where long-stemmed and beautifully-coloured Carnations are appreciated. We have never seen a cleaner or healthier lot of plants than those in the nurseries at Iver; and as Mr. Dutton has such huge quantities to select from, there is no necessity for him to send out a single second-rate plant.

During recent years we have from time to time advocated the use of this class of Carnation for bedding purposes. Contrary to general opinion, they are quite hardy, and we know of several instances where plants have been entirely outdoors and unprotected for several years. But for bedding purposes it is no use planting small plants from 3-inch pots. Before such examples reach flowering size, half the summer has gone, and it is the use of such plants which has led to the belief that these Carnations are not suitable for bedding. If plants from 5-inch pots, such

as those we saw vast quantities of at Iver, are used, and are planted out any time from mid-April until mid-May, they will continue to flower until the end of October, or, if the weather is mild, well into November, when they can be carefully lifted, repotted and taken to the greenhouse to continue their display, or, if preferred, left where they are all the winter. If the latter course is adopted, they will need cutting back fairly hard the following spring.

As already stated, Mr. Dutton has practically every known variety in his nurseries, but, naturally, some are grown more than others. Thus, for cut flowers he prefers Beacon as a scarlet, although, of course, many prefer Britannia. Mrs. T. W. Lawson, White Perfection, White Enchantress, Winsor, Mrs. H. Burnett, Rose Pink Enchantress and Harlowarden are all favourites of his. A beautiful white variety that is as yet but little known is Niagara. We were very much impressed with this, and it undoubtedly is one of the coming Carnations. It has a splendid branching habit, flowers freely, and the blossoms are really exquisite. They are large and full, of beautiful texture and dense whiteness, and among many hundreds of blooms we could not find a burst calyx. But the feature above all which appealed to us was its powerful, yet delicious Clove fragrance. If you want a first-class white Carnation that smells as sweet as the Old Clove, get Niagara. Practically every novelty in Carnations can be supplied by Mr. Dutton, who believes in keeping his stock well up to date.

Apart from the perpetual-flowering type, border Carnations are grown on a very extensive scale at Iver. At the time of our visit many thousands of sturdy young plants were standing on ash-beds outdoors, ready for despatching to customers, and we have never seen a more healthy or sturdy lot. We have had occasion to refer to the Old Red Clove, and it may be interesting to record that Mr. Dutton has a particularly good strain of it. Indeed, so heavy is the demand that he finds it difficult at times to propagate sufficient of it to meet the requirements of his customers. Those who visited the National Carnation and Picotee Society's show at Vincent Square last year will remember very vividly the magnificent exhibit of border Carnations that Mr. Dutton staged on that occasion. It consisted of no fewer than eighty distinct varieties, and we doubt whether such an exhibit has ever been staged before. Malmaison Carnations are also grown and propagated on a large scale, and the collection at Iver includes all the best varieties.

By close personal attention to details, Mr. Dutton, who is an exceptionally keen and up-to-date man, has built up a business in Carnations which is among the foremost in this country, and we imagine that even more will be heard of his doings in the future than has been in the past. The coloured cover on this issue represents three varieties of Mr. Dutton's, which he thinks highly of.

The Royal Counties Agricultural Society.

The council of this society, encouraged by the success of the horticultural section at the Weymouth Show last year, have decided to include a flower show in their programme for the show to be held at Guildford on June 11 to 14 next. The management has again been placed in the hands of Mr. C. S. Fudge, secretary of the Southampton Royal Horticultural Society, who will be pleased to supply all particulars.

ANSWERS

TO CORRESPONDENTS.

TREES AND SHRUBS.

CYDONIA NOT FLOWERING (C. G.).—It is possible that the transplanting of *Cydonia japonica* last year may be the cause of the lack of flowers this season. There is nothing that you can do to hasten the flowering, and it is possible that if you leave your plant alone this year, a crop of flowers will appear next spring.

LARGE LIME TREE SHOWING SIGNS OF DECAY (Arboriculture).—The best thing to do with your Lime tree, which is deteriorating in health, is to go over the tree carefully and remove all the dead wood and rubbishy sucker growths. Then remove the turf to a distance of 6 feet outside the radius of the branches, fork the surface soil lightly over, and apply a dressing 6 inches deep of farm-yard manure and soil mixed. Leave for twelve months, and then sow with grass seed. The next best plan is to leave the turf on and give a thorough good soaking with cow-manure water two or three times during summer. It is necessary to remember that the feeding roots are a considerable distance from the trunk. The mere fact of clearing the dead wood away will have a beneficial effect. All wounds should be dressed with tar as soon as made.

KITCHEN GARDEN.

ASPARAGUS-BED AND SALT (E. K. M.).—Salt has the property of lowering the temperature of soils, and as clay soils are already too cold for the welfare of this plant, it would undoubtedly be unwise to apply it as a top-dressing at a time when the young grass is about to start into growth. The following will be found an excellent substitute, the quantity given being sufficient for one rood or perch of ground when mixed together: Kainit, 5lb.; nitrate of soda, 3lb.; and superphosphate, 2lb.

SEAKALE (F. G. G.).—The ground should be trenched 2 feet deep and liberally manured with rich, well-decayed farmyard manure, burying it 12 inches deep, as the roots of the plant delve deeply into the soil. As long as the ground is well and deeply cultivated and manured, the Seakale will grow well in any good ordinary garden soil; but it prefers a well-drained, deep loam of a moderately heavy texture, where it will develop splendid heavy root-stems in one year, yielding a splendid crop the second year. It is propagated by making cuttings of the strongest fang-like roots which are found at the base of the root-stems. These should be cut into pieces 5 inches long, the top part of the cutting being cut straight across and the bottom part wedge shape, to distinguish the top from the bottom, which is difficult otherwise. The best time to take the cuttings is the late autumn, when the roots are taken up for forcing. They should be tied up in bundles of eight, and then buried in the soil to within 1 inch of their top, allowing them to remain in this position until planting-time, late in March. It is not too late to take the cuttings now, and they must be served in the same way and allowed to remain in the bundle form until small buds are formed at the tops of the cuttings, which will be in three weeks or a month, when they should be planted out in rows. About the middle of March is a good time to plant, or earlier if the small buds on the tops of the cuttings are well developed before.

MISCELLANEOUS.

QUASSIA EXTRACT (E. W.).—Soak a pound of quassia chips in cold water for five or six hours; then boil in at least a gallon of water for eight hours. After this add sufficient hot water to make the amount up to ten gallons. Of course, a proportionate lesser amount can be prepared. At the same time, quassia extract, all ready for use, or, at least, it only needs dilution, may be obtained from all horticultural sundriesmen. Many prefer this to preparing the extract at home.

INARCHING GRAPE VINE ON VITIS COIGNETIÆ (J. G. K.).—A young shoot of this summer's growth of a Black Hamburgh Vine could, no doubt, be inarched on this ornamental Vine in the way you suggest; but with what result we cannot say, as we have no knowledge of the experiment having been carried out before. The young shoots united should be of similar size and age as far as possible, and, of course, the Vine in the pot must be well looked after as regards watering. The pot would be better plunged in the soil.

NAMES OF PLANTS.—B. T.—1, *Cypripedium spicerianum*; 2, *Cymbidium lowianum*.—**H. F. S., Kenley.**—1, *Euonymus japonicus variegatus*; 2, *Mercurialis perennis*; 3, *Prunus Avium*.—**H. K.**—*Rubus spectabilis*.—**Heather.**—1, *Juniperus chinensis*; 2, *Cestrum elegans*.—**J. P., Roydon.**—1, *Euphorbia splendens*; 2, *Strobilanthes dyerianus*.—**Amateur.**—*Iris pumila*.—**A. J., Sheffield.**—*Lotus Bertholletii*.—**H. W. C., Hants.**—1, *Lætia boothiana*; 2, *Tritonia crocata*.—**E. T., Nantes.**—*Narcissus intermedius*.—**Hex.**—1, *Spiræa arguta*; 2, *Rubus spectabilis*; 3, *Anemone fulgens*. The *Anemone* which grows freely in France and in Rome is *A. coronaria*. The curious growth is not unusual with several *Anemone* species. —**L. G. C. T.**—1, *Berberis Fortunei*; 2, *Saxifraga ligulata speciosa*; 3, *Narcissus Jonquilla*; 4, *Kerria japonica flore pleno*; 5, *Salvia Grahamii*; 6, *Lunaria biennalis*.—**P. H.**—The names, we believe, are as follows: 1, *Catherine Mermet*; 2, *Bouquet d'Or*; 3, *Reine M. Henriette*; 4, *Coronilla glauca*; 5, *Nepeta Glechoma variegata*; 6, too small to identify; 7, *Climbing Captain Christy*. For the mildew you should wash the foliage or spray with a fine sprayer, using Jeyes' Horticultural Wash or Abol.

SOCIETIES.

EDINBURGH SPRING SHOW.

THE annual spring show of the Royal Caledonian Horticultural Society was held in the Waverley Market, Edinburgh, on April 10 and 11. The dislocation of the railway traffic caused by the miners' strike had the effect of preventing some of the usual trade exhibitors from a distance from sending their exhibits; but those which were sent were of a high order, and the competitive exhibits were unexpectedly large, the only falling off in numbers being in the vegetable classes.

Among the trade exhibits were the following:

Messrs. R. B. Laird and Sons, Limited, Edinburgh, a large and tastefully-arranged group on the floor of the market, this comprising a number of Rhododendrons, including grand plants of Princess, Stella and The Queen, with Indian and other Azaleas, Acacias, Lilacs, Ivies, such as *Hedera dentata variegata*; Dwarf Polyantha Roses grafted on stems 1 foot high, and a number of other good plants. The arrangement was quite a change from the usual run of trade groups.

Mr. John Phillips, Granton Road Nursery, Edinburgh, sent a nice group of Azaleas, Lilacs, Spiræas, Astilbes, Clematises, Roses, Acers, Cytisuses and other plants neatly arranged in a circular form.

Messrs. Cunningham, Fraser and Co., Comely Bank, Edinburgh, showed a variety of rock plants prettily arranged on a rockery. These included many choice Primulas and other alpine, such as *Primula scotica*, *nivalis*, *frondosa*, *marginata grandiflora*, *ciliata*, *clusiana*, *Palinuri* and *muscaroides*. There were also *Arabis purpurascens* (rather like *A. aubrietoides*), *Haberlea kewense* (very near *H. Ferdinandi-Coburgi*), *Morisia hypogaea*, *Gentiana excisa*, *Androsace pyrenaica*, *Adonis amurensis flore pleno*, Heaths and many other good plants. A bright and attractive exhibit.

Messrs. Dobbie and Co., Edinburgh, staged a number of early and Darwin Tulips, Narcissi, &c., admirably grown and set up. We noted fine bunches of such Darwins as Rev. H. Ewbank, King Harold, Gretchen, La Candeur, Baron de la Tonnaye, Clara Butt and Nora Ware, with a capital variety of the early Tulips.

Mr. D. W. Thomson, Edinburgh, sent a bold and attractive exhibit of Narcissi, with Hyacinths and Tulips. The Narcissi comprised Sir F. Drake, Plenipo, Mermaid, Admiral Makaroff, Golden Bell, Emperor, White Queen, P. R. Barr, Silver Giant and many others. The Hyacinths included many fine varieties rarely shown in Edinburgh, and the exhibit was well staged with Lilacs and Spiræas.

Messrs. Dicksons and Co., Edinburgh, sent very fine seedling Amaryllises (*Hippeastrums*) of exceptional quality, the deep-coloured ones being particularly good; excellent Roses and other plants, the Roses including Bridesmaid, Franz Deezen, My Maryland, Mme. Abel Chateaus and others.

Messrs. Sander and Sons, St. Albans, staged a choice exhibit of Orchids, including a nice lot of *Cattleya Schrödera*, *Renanthera imschootiana*, *Dendrobium devonianum*, *Brasso-Cattleya Queen Alexandra*, *Odontoda Sandersæ* and variety Dora, *Trichopilia suavis*, *T. Hennisii*, *Cypripedium Maudiae* and many others.

Mr. D. McLeod, Ashton-on-Mersey, sent a small but good selection of choice Orchids.

Messrs. John Forbes, Hawick, Limited, exhibited a number of seasonable and forced plants. These comprised Tree Peonies in a nice selection, Mme. Stuart Low, Elizabeth, Ville de St. Denis and Louis Mouchelet being excellent. A few Delphiniums were also shown, with many Auriculas, Violas, spring Phloxes, *Incarvillea grandiflora* and other subjects. A nice lot of *Caladiums* were exhibited, Thomas Tomlinson being one of the finest.

Messrs. Young and Co., Hatherley, Cheltenham, set up one of the finest exhibits of Carnations of the Perpetual-flowering class ever seen in Edinburgh. We noted the unusually-coloured lilac pink A. S. Montgomery, Golden Glory, Cheltonia, Duchess of Devonshire, Hon. Lady Neeld, Edith Waters and Mikado.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, had an attractive group of Carnations, such as Royal Purple, Lady Alington, Mina Ward, Mikado, the Perpetual-flowering Malmaison Princess Juliana, My Favourite, Marmion and many others splendidly shown. They also sent Orchids in large variety, including choice varieties, with *Metrosideros floribunda*.

Mr. G. Reuthe, Keston, Kent, had a choice exhibit of Rhododendrons and alpine flowers. The former were very fine, and the latter included *Saxifragas porophylla*, *Salomonii*, *luteo-viridis*, *luteo-purpurea*, *Aizoon rosea* and many more, with *Lewisia Tweedyi* and *Howellii*; *Cytisus Ardoinei*, *Anemone Halleri*, *Fritillaria pallidiflora*, *Erythronium californicum*, *Pyxidantha barbatula*, *Arabis kelleriana*, *Schizocodon soldanelloides*, many Primulas and Drabas. The rare little *Rhododendron intricatum* deserves notice.

Baker's, Wolverhampton, showed *Aubrietia J. S. Baker* (deep purple), the very dark crimson Mossy Saxifrage Mrs. R. C. D. Hudson, *Lithospermum Heavenly Blue*, *Viola gracilis*, Primulas frondosa and others, Anemones, *Iberis Little Gem* and *Iris cristata*. An attractive exhibit indeed.

From Messrs. Hogg and Robertson, Dublin, came a grand exhibit of Narcissi, Tulips, &c. Among the former were King Alfred, Lady Arnott, Mrs. C. R. Hamilton, Lady Gore-Booth, Oriflamme, Brigadier, Albatross, and Mme. de Graaff. Quite a fine collection, admirably grown and staged.

The competitive section was quite up to the previous high standard, and was considerably better than the average.

A prominent class was that for a group of Orchids not exceeding 12 feet by 3 feet. Two entries were made, and the first prize, Messrs. Sander's cup, was awarded to Mr. J. Smith, gardener to Mr. Brooman-White, Ardarroch, for a grand exhibit of choice Orchids well staged and in very fine condition; second, Mr. F. Henderson, gardener to J. Wood, Esq., Wallhouse, with very good varieties, but not so well displayed.

For four stove or greenhouse plants, Mr. A. Smith. The Neuk, Peebles, was first.

For six plants in bloom, Mr. G. McKinna, Norton, won.

Mr. D. Kidd was first for Rhododendrons; and in the other hard-wooded plant classes, where the exhibits were also good, Mr. J. McIntyre, Challenger Lodge; Mr. C. D. Kerr, Langton; Mr. R. Whannel, Drum; and Mr. J. Pearson, Beechwood, were first.

In the Orchid plant classes, Mr. A. Findlay, Gogar Park, and Mr. W. G. Pirie, Dalhousie Castle, were first.

In other classes, Mr. A. McMillan, Mr. T. Hermiston, Mr. W. Robertson, Mr. J. Thorn and Mr. R. McAndie were the leading winners.

For Roses in pots, Mr. J. Thorn led, and other prize-takers in these plant classes included Mr. J. Wilson, Mr. W. Galloway and Mr. R. Whannel.

Cut flowers, as a whole, were extremely fine, Roses being wonderfully good. Mr. J. Pearson was first for *Maréchal Niel*, and for others Mr. J. W. Hebden.

In the Carnation classes grand blooms were staged, and the winners were Mr. A. McMillan and Mr. J. Wilson.

Mr. A. Dickson was first for hardy spring flowers, and Mr. W. T. Galloway for Parrot Tulips.

Alpines, Polyanthus, Auriculas, Primulas, &c., were, as usual, grandly shown, Mr. W. G. Pirie leading in the first with grand specimens, and Mr. G. D. Kerr, Langton, excelling himself with his noted plants of *Primula obconica*.

The decorated dinner-tables were attractive, the first prize going to Mr. J. Wilson for a good table decorated with Carnations; second, Mr. J. Hood, also with Carnations and Lily of the Valley.

Narcissi were very well shown, Mr. W. G. Pirie leading with twelve bunches of grand flowers from Mr. Cowan's famed collection.

The fruit classes were small in number, and the competition was limited. Mr. D. Kidd, Mr. J. E. Davis and Mr. T. McPhail took the first prizes.

Vegetables showed a falling off in numbers, but were highly creditable. Mr. J. E. Davis was first with his collection; second, Mr. R. Stuart. Amateurs showed well in these classes.

Mr. H. N. Ellison, West Bromwich, contributed one of his choice groups of Ferns. This included a number of *Nephrolepis*, such as *Neuberti*, *Marshalli*, *Marshalli compacta*, *exaltata grandiceps* and *tessellata*. *Gymnogrammes* were well shown, and comprised *G. Alstoni superba*, *G. chrysophylla* and *G. wetenhalliana*, with *Adiantum* in variety, among which we observed the fine *A. farleyense gloriosa*. There were also such Ferns as *Cheilanthes elegans*, *Asplenium unguale*, *Davallias*, *Lastreas* and *Platycerium*, with a number of superb flowers of *Adnet's Gerbera* hybrids.

The following awards were made to nurserymen's exhibits: Gold medals, Hogg and Robertson, and Young and Co.; silver-gilt medals, H. N. Ellison, Stuart, Low and Co., Dobbie and Co., Cunningham, Fraser and Co.; silver medals, G. Reuthe and John Forbes, Limited. A first-class certificate was awarded to Messrs. Young and Co. for Carnation Duchess of Devonshire, and an award of merit to Messrs. Stuart, Low and Co. for a new Carnation.

The prizes for a plan for laying-out pleasure ground and kitchen gardens, open to under-gardeners, were awarded as follows: First, H. G. Oliver, Buccleuch Nurseries, Hawick; second, J. W. Forsyth, Taymouth Castle; third, J. Smith, Whitehall, Cumberland.

The show was opened in a capital speech by the Marquis of Tullibardine, and the takings for the first day were £23 in advance of those of last year's show—a satisfactory result, especially considering the dislocation of railway traffic caused by the strike, this having prevented the application of the highly satisfactory arrangements made by the council for cheap fares.

ROYAL HORTICULTURAL SOCIETY.

IN addition to the fortnightly exhibition, the above society held a special show of Daffodils at Vincent Square on Tuesday, April 16. Owing to the earliness of the Daffodil season, the competitive classes were not as well contested as would otherwise have been the case. Hardy and forced shrubs, Carnations, Roses and alpine plants were all shown in wonderful profusion.

FRUIT AND VEGETABLE COMMITTEE.

Present: A. H. Pearson, Esq. (chairman), and Messrs. J. Cheal, Owen Thomas, J. Jaques, W. H. Divers, J. Harrison, J. Willard, A. Bullock, J. Davis, A. R. Allan, A. Grubb, A. Dean, H. S. Rivers, A. W. Metcalfe and W. E. Humphreys.

An attractive exhibit of early vegetables and salads from Messrs. Sutton and Sons, Reading, came in for general admiration. The collection comprised Lettuces, Tomatoes, Radishes, Cucumbers, Asparagus and French Beans, while the outstanding feature of the display was seen in a bed of Mushrooms in full growth. The variety shown was Twentieth Century, and the crop was surprisingly prolific. This was quite a novelty, and attracted a good deal of attention. Silver-gilt Knightian medal.

Two handsome boxes of Royal Sovereign Strawberries were shown by Mrs. Bischoffsheim, The Warren House, Stanmore. For this exhibit the society's silver Banksian medal was awarded.

ORCHID COMMITTEE.

Present: J. G. Fowler, Esq. (chairman), and Messrs. J. O'Brien, H. J. Veitch, W. Cobb, Gurney Wilson, F. Sander, H. G. Alexander, H. J. Chapman, T. Armstrong,

J. Charlesworth, W. H. Hatcher, J. E. Shill, W. P. Bound, A. Dye, W. H. White, F. Peeters, J. W. Potter, W. Bolton, J. S. Moss, J. Cypher, C. J. Lucas, S. H. Low, R. G. Thwaites, R. A. Rolfe and F. J. Hanbury.

Messrs. Stuart Low and Co., Bush Hill Park, Middlesex, showed a miscellaneous group comprising *Cattleyas* in variety and *Dendrobiums*, the group being overhung with arching sprays of *Oncidium*s. Silver Banksian medal.

Messrs. James Cypher and Sons, Cheltenham, were represented by a bright display of *Odontoglossum crispum* and *Pescatorei*, *Lælio-Cattleya G. S. Ball* and the long-tailed *Angræcum sesquipedale*. Silver Flora medal.

Messrs. Sander and Sons, St. Albans, created a gorgeous effect with a bank of *Cattleya Schrödera* and similar varieties. Numerous free-flowering plants of *Dendrobium devonianum* were likewise shown by this firm. Silver Flora medal.

Messrs. Hassall and Co., Southgate, N., showed *Lælio-Cattleya G. S. Ball* and *Renanthera imschootiana* in excellent condition, also a general collection of *Odontoglossum*s and *Cattleyas*. Silver Flora medal.

A meritorious group of *Odontoglossum*s in choice variety was shown by Mrs. Norman Cookson, Oakwood, Wylam-on-Tyne (gardener, Mr. H. J. Chapman). The varieties comprised some of the very best in cultivation. Silver Flora medal.

Messrs. J. and A. McBean, Cooksbridge, Sussex, showed magnificent flowering plants of *Cattleya* and *Odontoglossum* hybrids. Silver Banksian medal.

Messrs. Charlesworth and Co., Hayward's Heath, gained a silver Banksian medal for a small but choice group of rare Orchids.

A similar award was made to the Liverpool Orchid Nursery Company (Cowan's Limited), Gatacre, for *Lælio-Cattleyas*.

NARCISSUS COMMITTEE.

Present: E. Bowles, Esq. (chairman), Miss E. Willmott, Miss F. W. Currey, and Messrs. W. Poupart, H. Backhouse, G. Reuthe, C. Bourne, F. H. Chapman, W. H. Copeland, A. R. Goodwin, W. T. Ware, P. R. Barr, E. M. Crossfield, P. D. Williams, R. W. Wallace, C. Dawson, J. D. Pearson, W. B. Cranfield, W. W. Fowler, H. A. Denison, J. T. Bennett-Poe, W. A. Watts, W. Goldring, A. M. Wilson, G. W. Leak, F. Barchard, J. Jacob, H. Smith, G. H. Engleheart, J. de Graaff and C. H. Curtis (hon. secretary).

SHOW OF DAFFODILS.

SECTION I.—OPEN CLASSES.

Forty-eight varieties representing the different divisions: First, C. Bourne, Esq., Old Wharfe House, Simpson, Bletchley.

Twelve long trumpets: First, J. Mallender, Esq., Scrooby, Bawtry.

Twelve incomparabilis: First, J. Mallender, Esq.

Twelve Barri: First, F. H. Chapman, Esq., Rotherside Gardens, Rye, Sussex; second, C. Bourne, Esq.

Twelve Leedsii: First, J. Mallender, Esq.

Nine Poeticus: First, F. H. Chapman, Esq.; second, C. Bourne, Esq.

SECTION II.—AMATEURS ONLY.

Twenty-four varieties representing the different divisions: First, Rev. T. Buncombe, The Rectory, Black Torrington, North Devon; second, H. R. Darlington, Esq., Park House, Potter's Bar.

Six long trumpets: First, Rev. T. Buncombe; second, H. R. Darlington, Esq.; third, the Duke of Rutland, Belvoir Castle, Grantham (gardener, Mr. W. H. Divers).

Six incomparabilis: First, Rev. T. Buncombe; second, H. R. Darlington, Esq.; third, the Duke of Rutland.

Six Barri: First, Rev. T. Buncombe; second, H. R. Darlington, Esq.

Six Leedsii: First, H. R. Darlington, Esq.; second, Rev. T. Buncombe; third, the Duke of Rutland.

Six Poeticus: First, H. R. Darlington, Esq.

Three doubles: First, H. R. Darlington, Esq.; second, the Duke of Rutland.

SECTION III.—AMATEURS ONLY.

Twelve varieties representing the different sections: First, W. B. Cranfield, Esq., East Lodge, Enfield Chase, Middlesex; second, G. F. H. Banks, Esq., Couchmore, Crawley, Sussex.

Three trumpets: First, R. Morton, Esq., Grange Dene, Woodside Park, N.; second, G. Stocks, Esq., 44, Bentley Road, Doncaster.

In a similar class for three trumpets, W. B. Cranfield, Esq., was first, followed by G. Stocks, Esq., and R. Morton, Esq., respectively.

Three incomparabilis: First, W. B. Cranfield, Esq.; second, R. Morton, Esq.

In a similar class for three incomparabilis this order was reversed.

Three Barri: First, W. B. Cranfield, Esq.; second, R. Morton, Esq.

In another class for three Barri, R. Morton, Esq., was first, followed by G. Stocks, Esq.

Three Leedsii: First, R. Morton, Esq.

Three Poeticus: First, W. B. Cranfield, Esq.; second, R. Morton, Esq.

R. Morton, Esq., was first in a similar class, followed by G. F. H. Banks, Esq.

SEEDLING AND NEW DAFFODILS.

SECTION IV.—OPEN CLASSES.

Twelve varieties introduced since 1907: First, C. Bourne, Esq.

Twelve varieties not in commerce: First, E. M. Crossfield, Esq., Cossington House, Bridgewater; second, F. H. Chapman, Esq.; third, J. Mallender, Esq.

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THE GARDEN

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ORCHARD AND WOODLAND

SATURDAY,

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J. B. HOUGHTON, Esq., Runcorn, writes, April 13th: "Plants to hand in good order and condition. I must congratulate you on the excellent way the goods were packed. It reflects very great credit on those responsible for the work."

Mrs. GLOSSOP, Whitechapel Manor, S. Molton, writes, April 16th: "Many thanks for plants. They arrived quite beautifully packed, and are now all planted, and look as fresh as if they had never been removed."

J. WILDE, Esq., "The Limes," Gravesend, writes, April 16th: "Plants arrived this afternoon. I am delighted with them. They are strong, sturdy, and in the pink of condition, splendidly packed, and beautifully fresh. I have come to the conclusion after all where to buy my stock."

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are those whose foliage dies to or near the ground each autumn, coming forth again with renewed vigour the following spring. There are yet but few who secure the best results from open-air gardening, while anyone with a few rods of ground may enjoy a beautiful and permanent flower garden by planting these herbaceous or perennial plants; their first cost is the only cost, as they increase in size and beauty from year to year. The varieties described will succeed each other and give flowers from each spring until cut down by frost in autumn, and make the garden a source of unflagging interest. With slight attention to their selection, varieties may be had for any condition of soil: wet, dry, sunny or shady—there are plants for all.

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THE HARDY CRIMSON SPIRÆA.—This lovely hardy dwarf Spiræa appears to be but little known, yet its merits deserve extensive cultivation; it is perfectly hardy, and flowers till late in the autumn. The flowers cover the path in dense clusters, and have a soft feathery appearance, which makes them extremely attractive and beautiful. A bed or border of these make a beautiful show, and take care of themselves year after year. Having a good stock I offer cheap. All two years old, grown in the open ground. 6 for 1/9; 12 for 3/-; 25 for 5/6; 50 for 10/-.

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FOR TREE STRAWBERRY AND THE LOVELY BRUGMANSIA KNIGHTII, see page iii, last week.

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12 Carnations 6d	20 Iceland Poppies 6d	60 Wallflowers 6d	
16 Chrysanthemums maximum 6d	6 Lobelia cardinalis 6d	25 Celery, red or white 6d	
3 Chrysanthemums for pots 6d	25 Lobelia, blue 6d	50 Cauliflower 6d	
50 Cornflowers 6d	20 Lupins 6d	2 Cucumbers (Frame) 6d	
1 Cupressus 6d	1 Lavender 6d	6 Cucumbers (Ridge) 6d	
1 Clematis 6d	8 Mrs. Sinkins Pinks 6d	80 Broccoli 6d	2 Aralia Sieboldi
50 Daisies, red or white 6d	25 Malope 6d	6 Marrows 6d	2 Arum Lilies
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Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Whitethorn Flowering Early.—During last week reports reached us from many of the Southern Counties that the Whitethorn or May-blossom (*Cratægus Oxyacantha*) was flowering freely. We also noticed this in many parts of Surrey and Essex as early as the 23rd ult., and in districts where it does not usually occur until the second week in May.

The International Exhibition.—The Chelsea Hospital grounds, where the great International Horticultural Show is to be held from the 22nd to the 30th inst. inclusive, already present a very busy aspect. There is quite a forest of huge tent poles, and some of the rock gardens are in the making. We understand that an official catalogue is to be published, and the sooner this is done, the better for the success of the exhibition.

Rose Conference and Dinner.—The Rose conference arranged by the National Rose Society will be held at the Holborn Restaurant, London, on Monday, May 20, at 5 p.m., when the president will deliver an address on "The Modern Development of the Rose," which will be followed by a discussion by the members present. There will be no charge for admission. The Rose conference will be followed at 7 p.m. by a dinner, which will also be held at the Holborn Restaurant. To this dinner some of the leading foreign rosarians have been invited as guests of the society. The charge for the dinner will be five shillings, exclusive of wine and coffee. Further particulars respecting both the Rose conference and the dinner will shortly be sent to the members.

An Interesting Gooseberry.—At a recent meeting of the scientific committee of the Royal Horticultural Society, Mr. W. G. Smith of Dunstable sent drawings illustrating flowers and fruit of a racemose form of Gooseberry, which had been referred to previously as a hybrid between the Gooseberry and the Black Currant on account of the thickly-produced clusters of very dark berries and their flavour, which was said to be intermediate between the Gooseberry and Black Currant. On careful examination of the flowers and fruit he had, however, been unable to find any trace of Black Currant. The plant appeared to be wholly Gooseberry, with flowers and fruit borne in racemes of from two to five. He could detect no Black Currant flavour, although the taste was delicious and strong. No oil glands are present on any part of this new form, and the fruits are perfectly glabrous. The pollen is exactly that of the garden Gooseberry. It flowers three weeks in advance of the Black Currant. The merit of the plant lies in its great fruit-producing properties, as on a given length of branch it produces more fruit in weight than

probably any other bush extant. The colour of the fruit when ripe is deep, almost black, maroon or dark mahogany, becoming black. The plant originated as a seedling in a market-grower's garden in the South of England, where it was regarded as a variety more curious than useful. Mr. R. H. Nicholls of Dunstable has acquired the stock.

Anemone apennina.—Conspicuous among the many dwarf-growing plants recently in flower at Kew, this European *Anemone* might be seen in many places used with effect for carpeting beds of shrubs, the pretty blue flowers forming a striking contrast to various coloured blossoms above. Being so easily obtained and adapting itself so well to this method of culture, it is a wonder that it is not more widely grown for the purpose, while it is equally effective when introduced as an undergrowth to thin woods and plantations. Taken up after the death of the leaves and divided into small sections, it is possible to raise a considerable stock in two or three years from a few original plants, though for anyone who wishes to obtain a quick effect it is possible to purchase roots at a small cost in autumn.

A Good Dwarf Flowering Shrub.—As its cultural requirements and stature are about on a par with many of the hardy Heaths, *Kalmia glauca* is a very suitable subject for associating with them. It forms a neat little shrub from 18 inches to 2 feet in height, clothed with small, narrow leaves revolute at the edges and glaucous beneath. The flowers, which are freely borne in terminal clusters, are of a bright rosy red colour, a very effective tint. Where grown in a mass and associated with the different Heaths, this supplies a tone of colour quite distinct from its many associates. It is the first of the *Kalmias* to unfold its blossoms. It must be borne in mind that, in common with most ericaceous plants, the presence of lime in the soil is very inimical to its welfare. A peaty compost such as that in which so many of its allies thrive will suit it well.

An Interesting Willow.—The principal interest attached to *Salix sesquiteria* lies in its inflorescences, for instead of bearing normal catkins of male and female flowers on different bushes, as is usual in the Willow family, male and female flowers occur in this case, not only on the same plant, but on the same catkin. The female flowers occupy the lower part of the catkin, and the male flowers the upper part. Described as a hybrid containing blood of three species—*S. purpurea*, *S. aurita* and *S. phylicifolia*—the abnormal condition of the flowers may be due to this combination, for a few other instances have been recorded of Willow plants bearing male and female inflorescences, which have been reported to be of hybrid origin. *S. sesquiteria* has little besides its flowers to commend it to general notice, for it is of no special decorative merit.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Schizostylis coccinea not Flowering.—With regard to *Schizostylis coccinea* not flowering (see THE GARDEN, April 6, page 176), I thought it might be of use to your correspondent "C. G." to know that we have discovered that, by constantly dividing the clumps and planting the little bulbs as far as possible separately, we now have quantities of very fine large flowers in the autumn.—E. H. S., Belfast.

Saxifraga Fergusonii.—I am not quite sure that those who ascribe the origin of *Saxifraga Fergusonii* to *S. Rhei* are correct. The flowers are much smaller, much deeper in colour, and the foliage is considerably smaller and more compact in its arrangement than that of the real *S. Rhei*. In this respect the plant comes closer to the old *S. muscoides purpurea* or *atropurpurea*, on whose possession we used to pride ourselves long ago, when it was the only red "Mossy" obtainable. However this may be, *S. Fergusonii* is a charming little plant, with fine crimson flowers appearing ten days or so before Guildford Seedling or Miss Stormonth, both of which are of much the same style. It is a delightful little plant for the half-shaded slopes of the rock garden or the rockwork edging.—S. A.

Iberis Little Gem.—Last year in my garden, situated on a sharp slope in the south-west district of London, many subjects suffered terribly from heat and drought, even though they were watered whenever possible. This tiny Candytuft, however, went through the season without turning a leaf, and it is now a really delightful object, being quite a mass of its little rounded heads of white blossoms. As it is of a neat and compact habit, it may be planted on the rockwork without any danger of encroaching on more delicate neighbours, or it can be, as in my case, assigned a place in the forefront of the herbaceous border. Its origin I do not know, but it appears to be related to *Iberis garrexiana*. At all events, it is a charming little member of a genus that contains so many delightful free-flowering kinds.—H. P.

A Beautiful and Distinct Clerodendron.—The genus *Clerodendron* is an extensive one, representatives being found in various parts of the globe, though most of them are natives of the Old World. In their several characters they are also very distinct, for of the hardy kinds *Clerodendron foetidum* or *Bungei* is almost herbaceous, while *C. trichotomum* is, under favourable conditions, quite a tree. Of the tender kinds (and there are a hundred or so of them) the difference is just as marked, some being much appreciated as free-growing climbers, while others are of a decidedly bushy habit. There is nothing of the climbing nature about *C. myrmecophilum*, as it forms a sturdy-growing, upright-habited plant, clothed with rather long lanceolate leaves. It will flower freely when from 18 inches to 2 feet in height, of which nearly one-half will be occupied by the flower-panicle. This bears a great number of flowers, disposed in regular whorls. The blooms are well over an inch across, and attract by reason of their uncommon tint, difficult to describe; but perhaps amber, with an orange suffusion, is as near as anything. It was originally sent to Kew by Mr. Ridley of the Botanic Gardens, Singapore, and in April, 1904, Messrs. Sander of St. Albans obtained a first-class certificate for it from the Royal Horticultural

Society. As might be expected, it is essentially a stove plant.—P.

A Beautiful Marsh Marigold.—*Caltha polypetala* has been a wonderful sight during the last few weeks. We have it planted around the edges of lakes and up a long, narrow gorge between forest conifers, together with other aquatics, and this scene is exceedingly picturesque and beautiful. Some of the blooms have measured $3\frac{1}{2}$ inches across, and, as we have hundreds of plants, one can easily imagine the sight. The bright sunshine has suited them well, and in this ravine the water becomes warm, trickling down from the hillsides. The common *C. palustris* has also been exceedingly floriferous and very beautiful. These plants are easily propagated, and can be made use of in many ways for beauty, especially in sunny nooks and out-of-the-way places.—W. A. Cook, *The Gardens, Leonardslee*.

A Coreopsis for the Greenhouse.—Although *Coreopsis Grantii* has been grown at Kew for half-a-dozen years or more, for some reason or other it has not found its way into general cultivation. True, I have met with it in two or three nurseries, but only to be taken up in a half-hearted manner, whereas it well merits extended culture. It is a native of an elevated region in Uganda, and succeeds well in the greenhouse. A bushy plant, reaching a height of 18 inches or thereabouts, this *Coreopsis* is well worth growing for the sake of its pretty bipinnate foliage; but the flowers are also very attractive, being about a couple of inches across, and of a bright yellow. Furthermore, a succession—commencing with the early part of the year—is maintained for a considerable time, an important matter when the greenhouse has to be kept gay with flowers at all seasons. It is certainly a decided break away from most of the flowers that now contribute towards the embellishment of the greenhouse.—W. T.

Exhibition versus Private Garden Flowers.—The more I read present garden literature, the more I am struck by the apparent unfortunate and increasing divergence between "exhibition flowers" and those which the "private public" (if I may use so "Irish" an expression) desire to grow. Surely they should run on parallel lines, to their mutual advantage. Flower shows, I always supposed, were intended to encourage the improvement of garden flowers; but, if so, they now seem to have almost entirely departed from any such purpose. Now one often hears, "Oh, it's no good going to flower shows; they are only for exhibitors and for professional florists' advertisements. They are no use at all for us amateurs." The fact is, we amateurs have found out by dire experience that exhibitors chiefly go in for special "show" sorts, producing a few "show" blooms from among an immense number of plants, so it has come to our shunning exhibition flowers instead of cultivating them, for what amateurs usually want are flowers of artistic form and refined hues which will bloom freely and make a prolonged display in our gardens and conservatories, and be what an old friend of mine once described as "good cut-and-come again flowers" to adorn our houses. A noteworthy example of the divergence was observable in the Rev. J. Jacob's recent remarks (page 191, issue April 20) *re* Daffodils. Much as it grieves one to differ from a writer whose delightful discourses are always of interest, his remarks illustrate exactly the opposing points of view. He delights in an exhibitor's flower, which, to the artistic eye of the amateur, too strongly resembles in

its regularity the milliner's machine-made flowers at something three farthings a dozen. Cannot someone devise a plan whereby we may manage to draw the diverging aims of the exhibitor and amateur together; while not depriving the professional florists of their advertisements, and thus realise the original good intent of flower shows?—AN AMATEUR.

Primula frondosa.—I am much interested in the subject of the best manner to cultivate *Primula frondosa*, which was charmingly illustrated in the photograph in THE GARDEN of April 20, page 194, and on whose cultivation Mr. Malby discourses in his usual pleasant and informative way. It is nicely in flower here, and is one which is always appreciated. It is a dainty little plant, and, so far as my experience goes, one of the most satisfactory of the *Primula* species, save, perhaps, a few of the older ones in our gardens. The question of the best position in which to cultivate it appears to be open to discussion, and Mr. Reginald Farrer, who probably knows as much about the cultivation of these plants as anybody, says that "it dislikes excessive moisture and rots away promptly if annoyed by it. On a well-drained corner of the rockwork, however, I have great fat perennial tufts of it." On the other hand, Mr. Lewis A. Meredith, writing from County Wicklow, says in his "Rock Gardens" that "it likes a half-shady position in moist sandy peat and loam." Then Mr. Malby tells us that with him "it thrives in a fairly moist vegetable soil, with loam, sand and grit added," adding "I generally place about the plants pieces of sandstone half buried in the earth to prevent too rapid evaporation." It will thus be seen that there is an apparent conflict of experience, although this may be largely due to the rainfall and moisture in each district. My own knowledge, extending now over a good many years, is more in accord with that of Mr. Malby and Mr. Meredith than with that of Mr. Farrer. I have at present some young plants in pots which were subjected to rather dry conditions while in a young state, and these have not thriven with the same vigour as others which had more moisture from the beginning. In the open I have grown it for a number of years, and have always found that it thrived better in a moist position, such as that advocated by Mr. Malby and Mr. Meredith. It is doing excellently with me under the same conditions as *P. denticulata*, and close to *P. rosea* and *P. Munroi*, the last two in particular being moisture-lovers. In all dry weather, moist though this low corner is, it receives frequent soakings with pure water. On the other hand, it is well drained. I cultivated it for years in one of my former gardens on the margin of a small Water Lily pool, and in a place where the soil was not only moist, but really wet all the year round, this border being on the cement margin with the water soaking into the border. The only care needed there was attention in winter and spring, as there the plants were lifted by the frost, and if not attended to at once were apt to be destroyed. I have personal knowledge of the plant in its native habitats in Thrace, but there it is said to be a mountain species, though whether it is in moisture or in dry conditions I am not aware. By the way, there is a conflict of statement respecting its colour. Nicholson's "Dictionary of Gardening" says it is blue; Mr. Malby calls it pink; but to me a kind of lavender rose would appeal as better describing the tint, evasive as are the colours of flowers.—S. ARNOTT, *Dumfries*.

Crocuses in the Woodland.—The illustration of the woodland scene in spring, page 181, issue April 13, is a charming one, and reminds me of Primroses in the Oak woods of the New Forest, where they grow by the acre, spreading from the woods over the banks, covering the grass by the roadsides and to the very edge of the metal portion of the latter. The Primroses have been growing there for very many years, and Crocuses may be grown more extensively than they are, as shown in the excellent illustration referred to above. The flowers last longer in the partial shade.—B.

Celmisia Seeds for Readers.—When I sent a letter to THE GARDEN some time ago offering seeds of *Ranunculus Lyallii*, I was surprised at the result. I had applications from our own New Zealand, Australia, America, England, Ireland, Scotland, Bavaria, Belgium, Finland and Holland. I have now some seed of *Celmisia coriacea*, which is almost as beautiful as the *Ranunculus* and much easier to grow, and I offer that to your readers. I do not sell it, not requiring the money, but I should be glad to have in exchange some rare seed or bulb. I have also seeds of other beautiful flowers. I hope to send a photograph of the *Celmisia* when I can get it.—(Mrs.) E. T. IZARD, Whanaka, Christchurch, New Zealand.

Fruit Trees for Garden Effect.

This subject was recently raised to me by an amateur as we stood in view of a fine standard Pear tree. Every twig was loaded with blossoms, the whole having a very fine effect. The question was asked, "Why not plant fruit trees for this purpose in addition to planting for fruit?" One was inclined to echo the question, "Why not?" for surely the thought that it is *only* a fruit tree should not prevent us from admiring its beauty when in flower. The two double cordons illustrated on this page are of the variety Mme. Treyve, which is certainly one of the most showy of Pears when in bloom. The espalier on page 216 is Emile d'Heyst, a variety which commonly follows a profusion of flowers with a heavy crop of fruit; in fact, it is not yet sufficiently valued in gardens. Incidentally, the trees serve as illustrations of the good results of reasonably rapid extension of main branches, the desired balance between root and stem thus being promoted in a most satisfactory way.—C. WAKELY, Chelmsford. [The trees illustrated are growing in the Essex County School Gardens at Chelmsford, where Mr. Wakely has got together a very fine collection of fruit trees of all kinds, the whole of which are in splendid condition.—ED.]

FORTHCOMING EVENTS.

May 7.—Scottish Horticultural Association's Meeting.

May 8.—East Anglian Horticultural Club's Meeting. The subject for discussion will be "The Preparation and Application of Natural Manures."

THE ROSE GARDEN.

SOME NEW ROSES AS SEEN UNDER GLASS.

ALTHOUGH new Roses are produced annually to an alarming extent, there is always a sort of expectancy from the Rose-loving public that something really tip-top may be introduced. The marvellous diversity in this wonderful flower warrants us in expecting really remarkable novelties, and I feel sure we have yet in store some really great surprises, even rivalling Lyon Rose and Rayon d'Or. Now, it is not always wise to judge new Roses as seen

number of it planted out. Another of Messrs. S. McGredy and Son's novelties that has been very fine is

Evelyn Dautesey, a glorious Hybrid Tea of Pharisæer type, with the lovely colouring of La France and Mrs. W. J. Grant blended; in fact, it opens with quite a reddish carmine shade, not unlike Laurent Carle.

Mrs. Amy Hammond is yet another from Portadown, and one of very great charm, the blending of amber, apricot and flesh pink being very lovely. This, combined with the shapely buds, will make it, as the raisers say, "everybody's Rose." The purity of the white blooms of

Mrs. Herbert Stevens is quite dazzling when grown under glass. It is like a pointed I'Innocence, without the latter's very delicate petal. If I mistake not,

Mabel Drew will prove one of Messrs. Alex. Dickson and Sons' best introductions. For greenhouse work it is splendid, the exquisitely shaped, solid blooms being produced in wondrous perfection. Although termed a Hybrid Tea, it comes very near the true Teas, almost, if not quite, as much so as Mrs. Foley Hobbs and Mrs. Myles Kennedy.

Mrs. Fred Straker has been delightful. I think of all new Roses of the orange crimson colours this is one of the loveliest, and its form is exquisitely beautiful. The long buds have the petals so beautifully arranged at the point that this alone gives to the Rose a rare distinction. This variety cannot fail to become very popular.

F. R. Patzer.—This Hybrid Tea has been so very fine and its blooms so large that it astonishes me this Rose has not received a gold medal. I really think the gold medal should be retrospectively, so that when a variety proves, as this has done, that it richly merits the award, the authorities should have power to award it. The form and substance of this Rose are all that can be desired, the outer petals being exquisitely pointed. It reminds me somewhat of a Mme. Abel Chatenay in form, except that it possesses a fine high centre, and is very substantial also. The colouring in the centre is like a very clear Catherine Mermet, but the outer petals have an orange pink shade. In a cool

house, blooms will last fully a week, and even more when fully out. I have some flowers at the time of writing that were good ten days ago. I heartily congratulate Messrs. Alex. Dickson and Sons upon raising this fine novelty. Whatever we may say of

Lady Hillingdon outdoors, there is no gain-saying its value as a forced flower. If it were a little stiffer in the stalk, it would be a perfect golden Rose, and even as it is, with its fault of a somewhat weak flower-stalk, it stands unrivalled at present. How long it will remain so when Sunburst is grown as largely remains to be seen. A most delightful colour is



TWO DOUBLE CORDON PEAR TREES IN BLOOM. THE VARIETY IS MME. TREYVE.

under glass, but we may form a fairly accurate opinion of their merits. I must admit I was much disappointed with

Mrs. Joseph Welch last summer, for its blooms on shot-out buds came almost single, although with huge petals. But now I have before me a glorious flower, of remarkable depth of petal and of a lovely rich brilliant rose pink. In the bud it is quite unique in form, few Roses being of such a beautiful elongated shape, and I should say it will be a fine commercial flower for this very reason. My plants have been grown somewhat cool, so that for the cool greenhouse it is to be recommended, and no one would do wrong to have quite a large

Andre Gamon, a Hybrid Tea of a shade not as yet at all plentiful, and one that may be described as cochineal rose. It is a beautifully-formed flower also, and is a worthy introduction of the Lyons wizard, M. Pernet-Ducher. Although I have not grown it as yet under glass, I have a fine account of the Yellow Druschki from Australia. I suppose the Rose that is meant by this appellation is

Natalie Bottner. Mr. Arthur Moore of Hunter's Hill, New South Wales, describes the variety in the "Journal of Horticulture of Australasia" as a stupendous Rose. The colour of the flower, he says, was like a good Hugo Roller, and the shape, if anything, an improvement on Frau Karl Druschki. The free-flowering nature of the variety may be judged when it is stated that three plants (maidens) carried no fewer than forty-three buds. I am trying the variety outdoors, and I hope to be able to report upon its behaviour later on.

Mrs. George Shawyer is well holding its own this year, and bids fair to become one of our leading deep pink varieties for forcing. Nothing can surpass the glorious elongated blooms, perhaps

Roses always command admiration, much more so than flat Roses, although the latter may be very artistic in the arrangement of the petals, and when we have real brightness of colouring, as in Mrs. G. W. Kershaw, they are doubly valuable. I should say market-growers would find this Rose a great favourite, especially for field culture. It was introduced by Messrs. A. Dickson and Sons in 1906.

W. E.

WORK AMONG THE CHRYSANTHEMUMS.

IN this month there is a great deal of very important work to be done. The final selection of the plants for the last potting must be carried out now, so that those retained will have more room in which to grow. The wise cultivator will see to it that his plants are given sufficient room, so that the stems may be strong near the base and not drawn and spindly. If spindly, the sap-vessels are contracted, and later on, when it is necessary to feed the plants, the latter cannot

with a flat surface. On the latter sprinkle the coarse sand, then the bone-meal. Follow with the leaf-soil, artificial manure, wood-ashes and soot respectively. All should be laid on evenly; then commence at one end and turn over the whole mass, still retaining the same form of the heap. Once more turn over the heap, and do not afterwards throw the compost into a pointed heap, but use it as mixed from the floor; then the fine and the lumpy portions will be available in proper quantities for each plant as the work of potting proceeds. Some varieties are less robust than others, and do not make roots as freely; these require more of the lighter parts of the soil, such as leaf-soil and sand. The proportions for an ordinary compost should be as follows: Fibrous loam, two parts; leaf-soil, one part; rotted manure and sand, one part. To each barrow-load of the above combined parts add a 5-inch potful of bone-meal and a similar quantity of soot. The concentrated manures must be used according to the instructions given with them.

The Pots and the Crocks.—Both pots and crocks must be washed and dried before they are used. The insides of the pots should be very clean. Ten-inch pots are suitable for the strong-growing varieties, such as Mrs. Luxford. Two plants of a weaker-growing variety may be placed in a pot of this size, or one in an 8½-inch pot. Two strong-growing plants, if grown in a single pot, would require a 12-inch one.

Potting.—The soil must be made firmer for plants of the incurved section than for those of the average Japanese, and the weakest-growing varieties must not have the soil pressed as firmly around their roots. Place a good crock over the hole in the pot, then a few smaller ones. On the crocks lay some of the rough turfy lumps from the compost and a few half-decayed Oak or Beech leaves, sprinkling on them a teaspoonful of soot. Finally, leave nearly two inches of space at the top for a future top-dressing and for general watering and feeding. When potted, place the plants in rows, the pots almost touching one another, on boards or ashes. They may remain in this position for a fortnight. Do not overwater, and on fine mornings syringe the foliage with tepid water.

Varieties to Stop Early in May.—They are to be grown on, after being stopped, to produce first-crown buds in August. Mr. H. Thornton, Captain Mitford, Hon. Mrs. Lopes, Edith Jameson, Mme. Rivol, Mme. Radaelli, Bessie Godfrey, Duchess of Sutherland, Mrs. C. Penford and Master David.

To Stop During the Latter Part of May.—Frank Payne, Mrs. W. Iggulden, W. Gee, F. S. Vallis, Reginald Vallis, James Lock, Lady Talbot, Walter Jinks, Miss A. Nicolls, Rose Pockett and Purity. The stopping must be done if the natural break has not occurred.

Border Varieties.—Gradually harden the young plants and put them out in deeply-dug, well-enriched soil, surface-mulching at the end of the month.

AVON.



AN ESPALIER TREE OF PEAR EMILE D'HEYST IN FULL BLOOM. (See page 215.)

one of the best from this standpoint that we have at present.

There are several other varieties I propose to note, but must defer this to another article. P.

ROSE MRS. G. W. KERSHAW.

THERE is one grand quality about the novelties from Newtownards, and that is that they improve upon acquaintance. This is not the case with a great many new Roses. They are seen, perhaps in superb form, when grown as pot specimens; but when brought under ordinary cultivation they do not come up to our expectations. The beautiful Hybrid Tea named above is really a grand Rose with me, far superior to Joseph Lowe, a Rose it resembles to some extent, except that it has the glorious deep bloom of a Pharisaer with Joseph Lowe colouring. These deep-petalled

receive the benefit they would if the sap-vessels were large.

Mixing the Compost.—Usually, the main batch of plants is potted from the middle of May to the end of the month. In June many plants are also potted, and it is advisable to mix the compost for all at the same time, namely, early in May, if this work has not been done already. The ingredients should be well mixed together, so that all plants may have an equal share. Some cultivators make a conical-shaped heap; this is a wrong way, because the lumps roll to the base, and, furthermore, it is impossible to know for sure whether the small parts, such as sand, wood-ashes, bone-meal and artificial manures, have been evenly distributed. First spread out the fibrous loam on the ground or floor of a cool, open shed. The loam should be 1 foot deep,

THE ROCK AND WATER GARDEN.

CONCERNING THE HARDY WATER LILIES.

(Continued from page 208.)

Some Peculiarities of Water Lilies.—In their growth there is quite a distinctive feature in the rhizome (I think this term may be applied) of the *N. odorata* section to that of the *N. Marliacea* group. In the former instance it appears to be quite hard and solid as contrasted with the latter, and it never swells away into such thick, fleshy stems. I once had a plant of *N. Laydekeri rosea* that for many years never made an offset at all, but continued to extend from the growing end only, until at last, through an injury by being eaten at the growing end, it decayed away and was ultimately lost—not, however, before we secured a seedling from it, which is now thriving well; but it has the distinctive features and flowers identical with those of its parent. In this instance the seedling came into existence close to the margin of our pond in shallow water; this feature I have before noticed in other collections. The seed is probably wafted into the shallows and there it remains. It is very well known that Water Lilies close quite early in the afternoon during fine, bright, sunny weather, but that they remain open longer when it is dull and sometimes showery. In September, however, the new race of hybrids remain open much longer in the afternoon. I have noted them still open during the clear moonlight evenings that we often have during that month. A few years back there was a tendency on the part of some of the hybrids to produce a multiplicity of small growths and relatively small foliage. In this state many did not flower at all, and not a few ultimately died in consequence. The only remedy that I found was to carefully sub-divide, and in that way try to secure normal growth again.

Some of the Best Varieties to Grow.—There is now a wide range of choice, both in point of habit, in growth, and also in that of colour. Selections may be made for deep water and for shallow pools, as well as for fountains and for tubs. For deep water, or comparatively so, say, 4 feet up to 6 feet, I recommend the following: White—*N. Marliacea albida*, *N. virginalis* (new and fine), *N. gladstoneana*, and *N. candidissima*, which I believe to be the same as *N. alba plenissima*; pink—*N. Colossea* (magnificent), *N. Marliacea rosea*, *N. Marliacea carnea* and *N. Mrs. Richmond* (new and very fine). These are all effective varieties. Yellow—*N. Marliacea chromatella* and *N. mooreana*, which is of a deeper shade; carmine, crimson and deep red—*N. atropurpurea* (the finest deep crimson), *N. gloriosa*, *N. ellisiana*, *N. lucida* and *N. Marliacea rubropunctata*. Until the growth becomes robust, these should all be kept in shallow water.

For water from 2 feet up to 4 feet, or thereabouts: White—*N. caroliniana nivea*, *N. odorata maxima* and *N. candida*; pink—*N. Laydekeri rosea*, *N. caroliniana rosea* and *N. somptuosa* (new); yellow—*N. odorata sulphurea grandiflora*; carmine, crimson and deep red—*N. Escarboncle* (new and fine), *N. James Brydon*, *N. Robinsonii* and *N. Vésuve*. For shallow water and for fountains: White—*N. odorata pumila* (syn. minor); pink—*N. odorata exquisita*; yellow—*N. pygmæa helvola*; red—*N. Marliacea ignea* and *N. sanguinea*.

JAMES HUDSON, V.M.H.

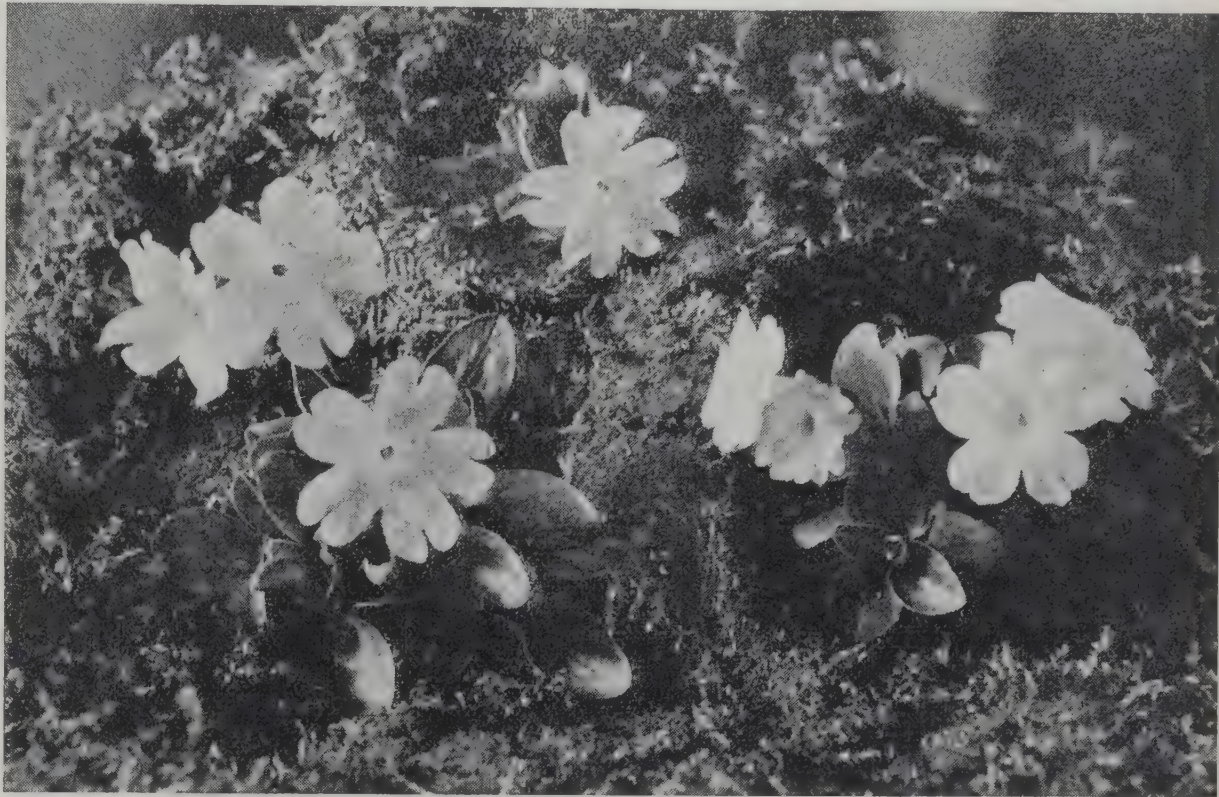
THE FLOWER GARDEN.

SOME RARE HARDY PRIMULAS.

Primula Allionii.—This rare and interesting little *Primula* is indigenous to the region of the Maritime Alps between Cuneo and Nice. The peculiarity of this plant is the strangely sunless places it chooses for its habitat, for under natural conditions it is found in cracks and crevices of hard limestone cliffs, from which the direct rays of the sun are shut off by some obstacle. Moreover, it grows in shallow caves where no rain falls on it, and which are practically sunless. In this case the roots must get their moisture from the

attempt to grow the plant in Scotland in the open air must remember that protection from rain and surface moisture are absolutely essential to the fulfilment of their object.

The difficulties attending cultivation are minimised in the case of pot plants grown in a cold frame, for under these circumstances it is quite easy to grow and bring to a high standard of excellence if proper potting material is used. In proof of the above observations I can at the time of writing (April 8) show several fine plants in full flower, the colours of which range as previously stated. Probably it may be grown in a moraine, but as to this I can give no details, having had no experience of such method of culture in



PRIMULA VENZOI IN DR. MACWATT'S GARDEN AT DUNS.

porous substance of the rock. Apart from this, it can be grown in situations exposed to the sun; but this is contrary to its normal course. It is a plant of very small habit. The elongated rhizome has adherent to it the dead leaves produced in former years. The leaves are rounded or oblong or oblong-cuneate, thick, soft green in colour, somewhat oily, very sticky, thickly covered with colourless glands. The margin may be entire or somewhat dentate. The flower-scape is so short as to be barely perceptible, being only 1 millimetre long. It bears an umbel consisting of from four to seven flowers of very large size considering the dimensions of the plant, and of a varying tone of colour. The variation ranges from deep rose pink with a white eye to a faint flesh colour.

The mode of inflorescence is somewhat unique, the large flowers, which come out in succession one or two at a time, lying flat in a cushion of leaves. It is certainly difficult to grow in the open, but if its natural conditions are imitated, the task can be made easier. It is imperative to plant it in soil adapted to its nature. The most suitable places are an expanse of gritty, calcareous loam, or a crevice in the rockery in a large piece of soft tufa in a perpendicular position beneath an overhanging piece of rock, so as to protect it from direct sun and rain. Bearing these precautions in mind, there is no reason why success should not be attained. Gardeners who

connection with this particular plant. Cuttings root easily, so there should be no difficulty in raising a stock if desired.

P. tyrolensis resembles *P. Allionii* in all essential particulars, but there are various points of divergence which serve to distinguish them. Its name furnishes a clue to its place of origin, restricted as it is to the Dolomite Alps of the South Tyrol. Even in this region it is only found on rocks and on stony expanses. The plant is seen at its best when it commands an open situation in soil of a loamy nature, with the addition of a little peat and sand. The first point which strikes the observer when making a comparison between this *Primula* and *P. Allionii* is the difference of geographical distribution. *P. Allionii* is limited to a very small district of the Maritime Alps, and *P. tyrolensis* is only to be found in an equally limited district of the Austrian Tyrol, for the rocks and stony expanses of the Dolomite Alps seem to suit it. Moreover, even in this confined area it does not grow abundantly, except at a height of 1,000 metres to 2,300 metres. The leaves of the two *Primulas* show few points of contrast, the most striking differences to my eye being the more vivid green of *tyrolensis*, also the leaves of the latter on being pressed emit a peculiar odour not perceptible in the case of *Allionii*. As to inflorescence, while the umbel of *P. Allionii* can bear as many as seven flowers, *P. tyrolensis* has one, or at most two. Personally, I find no

difficulty in cultivating this plant, for, unlike *P. Allionii*, it does not resent exposure to sun and rain.

P. tyrolensis lends itself readily to cross-fertilisation. It has formed hybrids with *Auricula*, *wulfeniana* and with *minima*. With the latter it has produced the pretty little *Juribella*, bearing fine lilac rose flowers, and with *wulfeniana* the beautiful hybrid *Venzoi*, otherwise called *venzoides*, *cridalensis*, *adulteriana*, *micrantha* and *Valmenona*. It is larger in every way than *tyrolensis*, but smaller than *wulfeniana*, and generally bears one to three large lilac-coloured flowers. *P. Venzoi* grows freely and flowers well, and is decidedly worth growing as a rock garden plant. The illustration of *P. Venzoi* is from a photograph taken by Miss Amy Cameron, Trinity, Duns.

Moreland, Duns.

JOHN MACWATT.

SEASONABLE NOTES ON AURICULAS.

Plants in Bloom.—The end of April and the beginning of May is, generally speaking, the time

demands more careful handling than the *Auricula* when it is in flower if its purity is to be maintained.

Plants After Flowering.—Immediately the beauty of the flowers is over, the head should be snapped off just below the flower-stalks—not low down in the heart of the plant, as is sometimes done. This point may appear at first glance to be a trivial one, but it is of real importance. When broken off as suggested, it gradually withers and dries up, while when it is severed at the extreme base it decays in the middle of the plant and is likely to lead to serious trouble, and not improbably to the loss of the plant. Of course, if the blooms are set for seed, the head must be retained and encouraged to ripen its crop, which will be ready for harvesting, and, if desired, for sowing some time in the month of July. If it is not sown then, the seed must be held over until the spring, but many prefer summer for the task.

Repotting.—Opinions differ as to whether May or August is the better month for carrying out

Compost.—Elaborate mixtures were the order of the day in *Auricula* culture at one period, but now the man who can secure rather strong fibrous loam, sweet, clean leaf-mould and coarse sand is perfectly happy, and he will probably take two parts of the first-named and one part each of the second and third named, mixing, for preference, two weeks before actual use. No manure is necessary with such a simple but excellent compost as this. It must be pleasantly moist at the time of use, and as little water as is consistent with the safety of the plant should be given afterwards until the roots are working again. To obviate the necessity for the application of water it is sound practice to reduce the ventilation for a time, as this will result in the soil retaining its moisture for a longer period.

Pots.—These must be absolutely clean, and those 3½ inches or 4 inches in diameter are the most serviceable. Depth is far more important than width, and those who can secure pots which are exceptionally deep for their diameter should

use them for *Auriculas*. The crocks used must be as clean as the pots which contain them, and they must be abundant, as perfect drainage is wanted. The top layer should be covered with moss to prevent the fine particles of soil washing down.

Three Good Varieties.—The coloured cover of this issue represents three good *Auriculas* sent to us by Mr. James Douglas. The grey-edged variety on the top left-hand corner is *George Lightbody*, an old one but still about the best of its section. On the right we have a beautiful green-edged *Auricula* named *Prince Charming*, and the yellow-flowered variety is *Dorothy Cutts*.
F. R.

PERENNIAL CANDYTUFT IN THE ROCK GARDEN.

THERE are few, if any, subjects in the rock garden that can equal the perennial Candytuft for effect at this time of the year. For weeks past the bold clump seen in the accompanying illustration has been a mass of pure white flowers, which from a distance look for all the world like a patch of snow in the sunlight, and there is every reason to assume that it will remain in flower for weeks to come. The perennial Candytuft is botanically

known as *Iberis sempervirens*, and the variety illustrated is *Garrexiana*, which differs very slightly from the true species. As a plant for the sunny side of the rock garden it is not to be excelled, and if planted in a suitable niche on an old stone wall or overhanging rockwork, it will quickly cover the face of the rock and flower as freely as when grown on the flat. This *Iberis* is both hardy and evergreen, and in consequence it has a cheerful appearance even in the dead of winter, when desolation is the prevailing note in the wall and rock garden. It is an easy subject to cultivate, and once a clump is established, it will remain good for many years. The variety under note is a native of Southern Europe, and the usual mode of propagation is by cuttings or by division, both of which are readily effected.



AN EFFECTIVE AND SNOW-LIKE MASS OF PERENNIAL CANDYTUFT.

of zenith as far as the flowers of *Auriculas* are concerned in the South, while they are rather later, of course, in the more northerly districts. To keep the blossoms pure in colour and clean, the plants will be in frames or a cold house, but they will demand unlimited supplies of fresh air; indeed, it is impossible to give them too much of it. Each stem will be securely supported by a light, neat stick, and if the head bears from nine to fourteen pips, it will be satisfactory. All these should be perfect, and this will have involved the gradual removal of some of the buds in the centre, which are commonly the weakest, and perhaps the removal of very big ones, as these are sometimes out of character, and therefore mar the beauty of the plant. Neither the fingers nor anything else must touch the blooms, or they will be disfigured. As a matter of fact, there is probably no plant which

this most important of operations. It is, however, certain that excellent results will follow work done at both seasons, provided that all the details are correctly carried out. Personally, I prefer the earlier time; but when the plants are just starting to make late summer growth in August is equally as good. A plant that is ripening seed should be left severely alone, while one that shows the slightest signs of anything wrong should be turned out at practically any time, have the roots closely examined and be at once repotted. Each grower must, therefore, exercise his own judgment in this direction and follow the system which has hitherto brought him the best results. The soil must be firm, and all roots which are not really active should be cut off, the underground stem being shortened back.

THE GREENHOUSE.

DISEASES AND INSECT PESTS OF ORCHIDS.

IN the present article I am making a slight departure from my usual course, and intend to give a few hints concerning the pests that are to be found occasionally in Orchid-houses. Judging by the enquiries which reach the Editor from time to time, these hints should be useful to readers. First I would call attention to the

Cattleya Fly, which, if not absolutely eradicated, will soon do a lot of mischief. It was first imported some years ago, and is still on some species of *Cattleya*, so any that show signs of this pest should not be allowed to enter the collection. This fly deposits its eggs in the young growth, usually when the plant is dormant. The grub causes it to swell abnormally, and after reaching a certain stage it remains stationary and is useless. If we make a close examination of the shoot, we shall find one or more tiny holes, where the fully-matured insect has escaped. The best plan is to vaporise the house every third day for a week or two, and cut away any growths that may be affected and burn them at once.

Thrips and Aphides make their appearance at intervals, more especially during the summer months, but here again fumigation is the remedy. The former must never be allowed to gain a foothold, for they are extremely partial to the young leaves of *Odontoglossums*, and once they puncture the foliage, the mark can never be removed.

Scale is not very troublesome, and whenever it is seen the plants should be carefully sponged, using a weak solution of some reliable insecticide or soft soap.

Cockroaches, Slugs and Woodlice have also to be reckoned with, for they devour roots, spikes and flowers. Phosphorus paste and Chase's Beetle Poison are recommended for the first-named; and to capture slugs we often go round at night with a lamp, while Lettuce leaves and saucers of bran make effective traps for these marauders. For woodlice a Potato cut into slices and hollowed out in the centre may be placed around their haunts, and if examined periodically a large number will be caught.

Fungoid Diseases are few and rarely trouble the Orchid-grower; but in some establishments such genera as *Disa*, *Oncidium* and *Odontoglossum* lose the tips of their leaves. Now, this is generally caused by excessive moisture at a time when the temperature is below its normal level, or the "damping" may have been done with a falling instead of a rising temperature. Lack of ventilation is also another reason; but I have found that by giving a free circulation of air, less

atmospheric moisture, and by maintaining the thermometer at the proper figures, such a state of affairs ceases to exist, or is considerably reduced.

"Spot" Disease, which is sometimes seen on *Phalænopsis*, the young shoots of *Dendrobiums*, *Cattleya gigas* and *Habenarias*, is either caused by improper cultural treatment or the roots of the plants are in a bad condition. Both can be remedied by careful handling of the water-pot and admitting a little air from the top ventilators. The *Cypripediums* and some *Lælio-Cattleyas* are affected by a

Leaf Rust, but so far I have been unable to discover the cause. A cure, however, can be

but it further possesses the precious gift of a strong Clove scent. It is an importation from America, and has been shown in wonderful profusion and splendid form by Messrs. Wells and Co., Merstham, at each meeting of the Royal Horticultural Society held this year. It was not, however, until the meeting held on April 16 that it was staged for certificate, and it then received an award of merit. It possesses a non-splitting calyx, and the flowers measure about four inches in diameter.

ABUTILONS.

ALTHOUGH a nice warm greenhouse is best for these plants early in the year, they will do well in a cool structure during the summer months. They may be wintered in a house from which the frost is just excluded, but such treatment is too severe, and as a result the lower leaves perish. To obtain nice pot plants the cultivator must grow them on rapidly, and by judicious pinching of the shoots secure a dwarf branching specimen which will bear flowers freely. The latter are always more numerous on quickly-grown shoots than on those that are stunted.

A newly-rooted cutting should be placed in a 3-inch pot. One established in such a pot must be transferred to a 5-inch or 6-inch one, and if judiciously fed it may be allowed to flower in the latter. The compost should consist of fibrous loam, leaf-soil or peat and coarse sand. Rotted manure may be used at the rate of a 7-inch potful to a peck of the compost named. Only really firm potting is necessary at the final shift. The same kind of compost must be used, but in a rougher condition at each repotting. The soil should be in a medium state of moisture, the plants being lightly shaded and very lightly syringed twice a day after each repotting, but not watered until the soil in the pots begins to dry; then a good soaking must be given and careful general watering be the rule afterwards. If so treated the plants will not lose their lower leaves. Pinch the plant when it is about 7 inches high. Side shoots will soon grow, and these must be duly pinched, so that in due time a nice bushy specimen will be the result. Some of the variegated-leaved varieties are



THE NEW PERPETUAL CARNATION WODENETHE. (MUCH REDUCED.)

brought about by dipping the plants in a solution of liver of sulphur (sulphide of potassium), an ounce being dissolved in two gallons of hot water, which must be permitted to cool before use. Lay each plant on its side to drain before replacing it on the stage. Any reader in difficulties should write to the Editor, who is always most pleased to render assistance.

SENTINEL.

A NEW WHITE CARNATION.

THE new Carnation Wodenethe is a strong-growing variety with large, bold flowers of spotless white. Not only is it remarkable for its purity of colour,

charming, and a group of the plants while in flower look very light and attractive in a greenhouse or conservatory. Good varieties are: 'Boule de Neige, pure white, good habit; Crimson Banner, deep crimson; Ernest Hempel, crimson and yellow, with red veins; Golden Fleece, a beautiful yellow; M. L. Langiers, crimson, overlaid with terra-cotta, a lovely variety; Souvenir du Bonn, variegated leaves, makes a lovely plant for the dwelling-room; Sylvia, a pure white-flowered variety with a strong constitution; Symphony, lavender, fragrant; and Thompsonii, variegated leaves, double flowers.

AVON.

DAFFODIL NOTES.

Is the Daffodil a "Florist's Flower"?—"Yes" and "No."—In asking this question, I must be understood to mean a florist's flower in the sense that a Tulip or an Auricula is; that is to say, that it is one which is wholly dependent upon itself and not upon its surroundings for its beauty, and that it must be viewed in this light when we form our judgment upon it. We see it by itself to the exclusion of all else, and so it comes to pass that it (the individual flower) has to be fashioned and formed to satisfy our sense of the beautiful. This is what is slowly being done. There are an increasing number of "experts" who think of it primarily as an isolated unit, and who are slowly evolving in their work of hybridisation and appreciation a flower whose "properties" tend more and more to an unapproached ideal. But there is another side to the Daffodil. The great army of gardeners cannot do without it in their gardens. I have come to the conclusion that it is difficult for either competitive classes or even trade groups to give by themselves the necessary help that the large majority of cultivators require. Should a national society ever come into being, I should strongly advocate "garden trials." They are wanted to winnow the chaff from the grain.

Choice Blooms at Vincent Square.

I was so often asked which I considered the best flowers (new) in the hall that I made it my business on the second morning to go round the different exhibits pretty carefully. The result was as follows: First, Avalon; second, Mrs. Ernst H. Krelage; third, Susan; fourth, Aladdin; fifth, Anthea; sixth, an unnamed Poet (?), which saw daylight in the early hours of the first morning when it was on Engleheart's stand, but which spent the rest of the time under the staging where "P. D." had his boxes. I would be greatly interested myself, and I think many of our readers would be, too, if some of our "experts" would write and say how far they agreed or disagreed with my selection. If this is done, however we may differ as regards the place in the class list in which we put the individual flowers, we will be at one in not selecting all of one "type." Happy for the Daffodil that it is so. Readers will like a description of my six. Avalon is a white-perianthed incomparabilis, with a diameter of $3\frac{1}{2}$ inches and a cup seven-eighths of an inch across. It has a great resemblance to the celebrated Challenger, but instead of a graduated red edge, it has a clear-cut band of colour all round the cup three-thirty-secondths of an inch deep, and the white of the segments is of quite Poeticus whiteness. It is an ideal bloom from a florist's point of view, and I congratulate Mr. Wilson of Bridgwater on being its raiser. Mrs. Ernst H. Krelage is the almost white Ajax that I wrote about last week. It received an unanimous vote for an award of merit from the committee. Susan is a white star-shaped incomparabilis (perianth

$3\frac{1}{2}$ inches, eye three-quarters of an inch in diameter), with a decided look of White Star about it, and with the spread-out segments of Princess of Holland or Pole Star. I held Susan and White Star side by side, and great as are the merits of the older flower, my heart went out to Susan. It was raised by Mr. P. D. Williams of Llanarth. Aladdin is one of the best, if not the very best, of the giant incomparables that have come from the Cossington manufactory of Mr. E. M. Crosfield of Pedestal fame. But instead of being a round flower, it



THE NEW NARCISSUS SILVER SPANGLE.

is a pointed one, and to state it as a proportional sum, as Spinnaker is to Lady Margaret Boscawen so is Aladdin to Pedestal. Anthea ($3\frac{1}{2}$ inches by 1 inch by $1\frac{1}{2}$ inches) is a pure white, round-looking giant Leedsii of that peculiar build which I seem to associate with Harold Cartwright and Jubilee (of Haarlem fame). It is a stiff, sturdy-looking thing, and somehow does not look as large as it really is. The reflexed edge to the cup and its resemblance to a miniature trumpet are very characteristic. It was exhibited

by Mr. W. B. Cranfield, who got it from Messrs. Barr and Sons. I rather think they raised it. The last flower on my list is the pink-rimmed Poet already referred to. It has the charming look of Lavender, having a similar but deeper shade of pink in the edge of its cup. It is of medium size and circular in shape (perianth $2\frac{7}{8}$ inches, eye three-quarters of an inch). Another lovely variety that I must mention is Silver Spangle, raised by Mr. Herbert Chapman of Henry James and yellow Freesia fame. It was exhibited before the committee and received an award of merit. It is a very round flower, with a large pale yellow eye $1\frac{1}{2}$ inches in diameter and a slightly undulating white perianth $2\frac{7}{8}$ inches. (See illustration on this page.) With the bare mention of the giant white trumpet (shown by Mr. van Tubergen, jun.) Zwanenberg I must close my notes for this week. I have known it for a long time in its native home at Haarlem, and I look upon it as the best garden flower of its type in the world.

Presentation of the Barr Memorial Cup.

As notified in the gardening Press, this cup has been awarded by the management committee to the Rev. G. H. Engleheart, and on behalf of this body its chairman, Mr. H. B. May, made the formal presentation at the opening of the business of the Narcissus committee on April 16. In a few well-chosen words he sketched the work of the late Mr. Peter Barr as the famous pioneer collector and populariser of the Narcissus family, and then, addressing the recipient, said that he, like his ancestor Dean Herbert, would pass down to posterity as a great raiser of new varieties, to whom every gardener owes a debt of gratitude for his bountiful enrichment of the genus. Equally well chosen and to the point were the words in which Mr. Engleheart acknowledged the honour. With "gratitude and pride" he accepted it. Old as he was in years, he had never grown old as a lover of flowers. He found a true pleasure in the production of "new and better things," and he felt sure no one would have given or would ever give a heartier welcome to new men and to new and more beautiful varieties than old Peter Barr. It was a large and handsome piece of plate, and when he had overcome the difficulty of conveying it home he would show it with feelings of pardonable pride to his family and his friends.

This unique episode must recall to many the nineties of last century, when Mr. Engleheart's novelties were first introduced to a wondering public. A coloured plate of some appeared in

THE GARDEN in July, 1889, and Seagull and Albatross in August, 1893. These were the days before inflated prices. Albatross could be had for £1 in 1897 and Bennett-Poë for ros. each. I believe Will Scarlett was one of the first to fetch a very high figure. One has always heard that three bulbs (half the then stock) were bought on the purchaser's own suggestion for £100. Should these lines meet his eye, it would be of interest to know if the tale is a pocryphal or not.

JOSEPH JACOB.

GARDENING FOR BEGINNERS.

CINERARIAS FROM CUTTINGS.

ALTHOUGH the usual method of raising Cinerarias is from seed, there is yet another way by which they can be increased, viz., from cuttings. It sometimes happens that a cultivator desires to work up a stock of a particular form, which may be an exceptionally fine variety, of good habit, or perhaps the colour may appeal

two of the bottom leaves and paring off the base to a joint, when it is ready for insertion.

Small pots, or what are known as 60's, should be filled one-half of their depth with drainage, over which is placed a thin layer of moss, when it can be nearly filled with soil, which ought to be pressed fairly firm. The cuttings are then dibbled in with a pointed stick around the edge. Each one is made secure, with its base resting upon the compost. A hand-light or cold frame should be chosen, and if the pots are kept shaded from strong sunlight and the frame kept closed for a few days, root-action will soon commence. As they become rooted, admit more ventilation, and gradually harden them till the lights can be dispensed with. By this time they will be in a suitable condition for potting off singly, using pots of a similar size to those advised for the cuttings. Cinerarias should not be given a rich rooting medium, or they will produce a lot of coarse foliage, which is not a good sign for a fine head of flower. I have found that loam, three-fourths, and leaf-mould, one-fourth, with a little silver sand added, makes a useful mixture, from which excellent results can be obtained. The plants must be kept as cool as possible and potted on as they become ready till they reach the flowering size, viz., pots about six inches in diameter. Although Cinerarias are easily-grown plants, careful watering is essential at all times, for if overdone in this respect the whole plant collapses, and no amount of care and attention will bring it back to its former healthy state.

S.

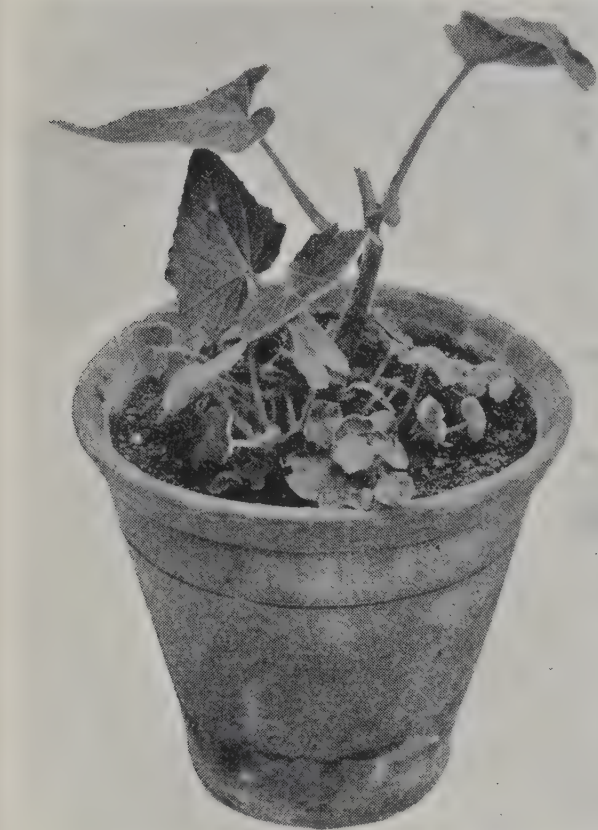
THE TREATMENT OF FORCED BULBS.

THOSE persons who have cultivated bulbs for a number of years and forced many in pots and boxes know how to treat the bulbs when the flowers have faded. Others, however, who have not grown bulbs before may be uncertain as to the correct way to deal with them. Often enough strong bulbs are thrown away, after they have been subjected to a forcing temperature in spring-time as useless. They are certainly weakened, but if given good treatment they will recover their strength in the course of a few years and be prolific in the production of flowers again. If planted out in borders where they can remain undisturbed for a number of years, the bulbs will once more grow naturally and produce flowers of more and more substance each year afterwards. Do not be tempted to dry off the bulbs prematurely. They soon appear to ripen if water is withheld; but they shrivel too much inside, and although the bulbs seem to be firm and ripe to the touch, they are not likely to flower. By all means select a warm, sunny corner

in which to place the pots and boxes containing the forced bulbs; but water them almost as often as before the flowering stage for a month or so; then gradually withhold the water, and when the "grass" has turned quite yellow and will come away from the soil freely if lightly pulled, turn out the bulbs, shake away the soil and store them in paper bags, made airtight, in a dry, cool room until the month of July or early in August, when they should be planted out in the borders as suggested. SHAMROCK.

THE TREATMENT OF NEW LAWNS.

OWING to the exceptionally hot, dry summer of last year, many owners of gardens have been obliged to renew their lawns, either during the winter by laying down turves, or quite recently by sowing grass seeds. Undoubtedly, the cleanest lawn can be obtained from grass seeds; but, in certain circumstances, where the owner lives in a country district and can procure good turves, he would be quite justified in using them. The way the new lawn should be treated depends, to a great extent, on the weather conditions after May comes in. If there are not frequent showers to keep the surface of the soil moist—it is quite moist enough below—water it through a fined-rosed watering-can; then the seeds will germinate freely if sown late. Guard the seedling grasses from attacks by birds, as the latter sometimes pull them up wholesale. Drive in a few sticks 6 feet apart, and fasten black cotton or thread from stick to stick about six inches above the ground; then the birds will be scared away for a time. The first cutting must be done with a sharp scythe, and not before the grasses are about five inches high; then it will be advisable to only take off the tips of the blades. The second cutting, also with a scythe, may be more severe, and afterwards use the mowing-machine, set rather high and without the grass-box. B.



1.—THE PARENT PLANT AFTER FLOWERING IS CUT BACK, THIS ENSURES THE FORMATION OF BASAL GROWTHS.

to him, while, of course, there is a chance of a sport or a new break appearing which he wishes to perpetuate. When such is the case, the taking of cuttings must be resorted to. It is well known that some florists' flowers do not reproduce themselves absolutely true from seed. There is generally a percentage of "weeds" or inferior plants; and if the grower wishes to have a large batch, he must raise sufficient plants to allow for the weeding-out process.

Now, for an amateur with limited space at his disposal, requiring a few specimens only, the system advocated on this page should be useful. As the plants pass out of flower, the top part should be cut off. This will throw a certain amount of vigour into the lower portion, from which the cuttings are taken. The plants are placed in a shady spot under a north wall, and not over-watered, when in a few weeks the young basal growth will be large enough for removal.

Selection of Cuttings.—Care must be exercised in making the selection, and those showing signs of producing flowers must be discarded, for they will never make good, strong plants. An ideal cutting is one that is short and stout, with leaves at close intervals, similar to those shown in Fig. 2. It is prepared in a similar way to an ordinary Geranium cutting, taking away one or



2.—BASAL GROWTHS OR CUTTINGS BEFORE AND AFTER INSERTION.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Greenhouse.

Cinerarias.—Any time during the present month will be found the most suitable for sowing the seed of these popular greenhouse subjects, except for late displays, when next month should be chosen. Sow the seed thinly in clean, well-drained pans filled with a finely-sifted mixture of loam, leaf-mould and coarse sand. Seedlings may often be found germinating on the stages and potted up.

Ornithogalum arabicum.—This is an interesting subject for the greenhouse at this season and easily grown. After flowering, the pots may be stood out of doors in a sheltered spot.

Zonal Pelargoniums.—Pot on the young plants as becomes necessary. Firm potting must be practised, as this is conducive to short-jointed, strong growth. Avoid over-watering. Give the plants plenty of air and sun.

Malmaison Carnations.—These are not nearly so popular now as formerly. Assist the plants with a sprinkling of Carnation manure on the surface of the soil. Ventilate freely and keep a sharp look-out for the rust. Water only when the plants require it, and spray over the plants on warm days.

Acalypha macafeana.—These are extremely useful for room decoration, easily propagated and grown. Pot on young rooted plants as becomes necessary, and grow on in a warm house. Shade from bright sun, and ply the syringe among the foliage to keep it clean.

The Kitchen Garden.

Celery.—Preparations should by now be well in hand for planting out the earliest supplies. Celery is a moisture-loving plant. Dust occasionally in the early mornings with soot. This will do much to ward off the attacks of the Celery fly. Seedlings for the latest supplies should be pricked out on a warm border.

Celeriac.—This vegetable is yearly becoming more popular. Seedlings raised about the same time as for maincrop Celery will soon be ready for the open ground. Plant on a well-prepared piece of ground, but on the level, 18 inches apart each way. Treat them as advised for Celery.

Dwarf Beans.—Throughout the month make a sowing or two as necessary of these in drills about eighteen inches apart. A seed dropped at every 2 inches or 3 inches will suffice and allow for thinning later on.

Broccoli.—Make another small sowing now to maintain a succession for early spring use.

Cauliflower.—Another sowing should be made of such varieties as Early Giant, Autumn Giant or Mammoth.

Vegetable Marrows.—Make a sowing of these for planting directly out of doors for succession towards the end of the present month. Those that were planted earlier in frames will need occasional attention. Pollinate the flowers and water the plants when required, choosing the morning for this. Peg down the growths as these lengthen. More air as the weather improves may be afforded them, and when danger of late frosts is past, remove the frame entirely and allow the growths to extend at will.

Fruits Under Glass.

Melons.—Where the culture of these cannot be performed in houses, and even when it is, supplies can be augmented by frame culture. Where these are supplied with a flow and return pipe, an earlier commencement can be made, and the quality of the fruit can be considerably improved by the judicious use of artificial heat during dull weather and at nights.

Frame Culture.—From this date onwards a sowing may be made. Two plants to a light are generally planted near to the centre, one trained to the back and the other *vice versa*. A hot-bed of long strawy litter and leaves is an advantage. A few days before planting prepare the bed, which should consist principally of loam, together with a sprinkling of lime rubble, wood-ashes and a little artificial fruit manure. Select a warm day for transferring the plants to their fruiting quarters. Give a good watering in,

keeping the lights as close as possible for a few days. The plants will need syringing twice daily when the weather permits. Hero of Lockinge is still one of the best for general culture.

Tomatoes.—The earliest crops under glass will be colouring the bottom trusses, and to hasten development the plants may be stopped at the leading growth and the side growths kept removed. Give the plants manurial assistance now, and see they do not suffer for want of water. Pot on later crops as it becomes necessary, always leaving space for future top-dressings where possible.

The Flower Garden.

Gunneras.—These are pushing into growth, and care should be taken that late frosts do not injure them by providing temporary shelter.

Bedding Plants.—Give abundance of air to these whenever possible. Those already placed out of doors must be covered at night with some form of covering. Towards the end of the month will be quite soon enough for planting out, especially subjects that are none too hardy, and until then the bulk of the subjects in the spring bedding arrangements will continue to yield a good display.

Polyanthuses.—If certain colours are required for massing in beds next spring, the seedlings now in flower should be marked for the purpose, also any flowers that are unusually fine in colour or form from which to save seed. Seed may now be sown, selecting a shady border. Prepare as fine a seed-bed as possible, and sow in drills 6 inches apart.

The Rock Garden.—During this month many varieties of annuals of a dwarf nature that will give a brilliant display may be sown in bare positions on the rockery. Sow the seed thinly and broadcast, and rake in and protect from birds. If the weather is wet and cold, wait until it is easy to prepare a good seed-bed. For a narrow border exposed to the south, a brilliant display can be obtained by sowing thinly the mixed colours of Portulaca.

Hardy Fruit Garden.

For the present do not be in a hurry to thin any crops of fruits such as Peaches, Plums, Cherries, Apricots and the like, as many of them will be worthless. If very thick, thin those that are badly placed. Keep the trees well syringed on bright days.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Strawberries.—Thoroughly clean the earliest quarter of Royal Sovereign, after which place clean straw for the fruit to lie upon when ripening.

Small Fruits.—Raspberries and Loganberries may need the young shoots reduced in number if too many are pushing from the base of the old plants. Hoe the ground among the former. This is the time when weeds get a start if neglected.

General Remarks.—A watch must be kept for aphides appearing, to be followed by syringing with soapsuds strengthened with a very small addition of petroleum. Quassia extract is also a valuable aphicide, but more expensive. Peach leaves affected with fungus must be picked off and burnt, and disbudding and thinning attended to where necessary.

Trees and Shrubs.

Pruning.—If the more coarse-growing shrubs have not yet been trimmed, they should be attended to at once. When done annually, little labour is involved.

Laurustinus.—This is an invaluable shrub in the less cold districts, flowering as it does for months on end during the coldest part of the year. It merely requires those portions which bulge out to be removed, and, if used as a hedge, to be trimmed, but not hard pruned into shape.

Cuttings.—Quite a number of the better kinds of shrubs, Deutzias, double Lilacs, Philadelphus, Hydrangeas, Roses, Buddleias and others, may be easily increased by soft cuttings of the young shoots in the same manner as many soft-wooded plants are. I insert them in sand, kept constantly wet, in the propagating-pit, and as soon as roots

are formed they are potted or boxed and gradually inured to a cooler temperature. Numbers at the present time are in the right condition to strike root.

The Kitchen Garden.

Seedlings.—Thin Carrots to 4 inches to 6 inches apart, and Parsnips to 9 inches to 12 inches, subsequently deeply stirring the surface of the soil.

Broad Beans.—These are much benefited by a bold bank of earth being thrown up on each side of the rows. Not only are the plants invigorated, but the soil serves to steady the haulm and to preserve it upright throughout the season.

French Beans.—These may now be sown, except on cold soils and in late districts. They prefer a very finely-pulverised and deeply-worked soil rather than much manure. Seeds need not be sown closer than 6 inches, and once germination is completed, every other plant should be removed, thus providing a space of 1 foot by 2½ feet between the rows. Scarlet Runners are slightly less tender, and should also be sown. If to be kept dwarf, allow a space of 4 feet by 2 feet.

Peas.—Shallow trenches, 6 inches deep, should be taken out for the later crops, so that when the seeds are covered the drills are 2 inches lower than the ground-level. When the crop succeeds Broccoli or late greens, it is not essential to cultivate all the ground, but the parts to be occupied by the Peas must be deeply cultivated. Thoroughly saturate the prepared trenches with water previous to sowing, unless, of course, an abundant rainfall occurs at the time.

The Flower Garden.

Carnations.—No time must be lost in supplying these with stakes, so that the growths as they spindle can be tied to them as needed.

Dahlias.—These should now be placed in cold frames and carefully ventilated by day and protected at night. Those that have filled their pots with roots should be transferred to larger ones, otherwise the stems get hard, the plants stunted, and they fail to get away into growth till some time after being planted out.

Lobelia cardinalis.—The varieties are much better planted at once than retained till later in pots or boxes. To do them well the soil should be enriched to almost the same extent as for Celery. Plant rather deeply, after which saturate the ground with water, and apply a slight mulch or surface-dressing in order to retain the moisture for the longest possible period. Do not fritter away effect by planting a few together, but arrange in bold masses, or, if mixed with other plants, use enough to ensure effectiveness. An extremely brilliant effect is obtained by using it in conjunction with a dark blue Larkspur and a yellow Antirrhinum.

Antirrhinums.—These ought to be ready for planting, and, if so, should be planted without further delay. They succeed best in rather firm ground. Accordingly, in soil of a loose nature, once planting is completed, the beds and borders should be firmly trampled, observing, of course, that the ground is not wet. One has to exercise a degree of caution in the choice of colours, Fire King, Orange King and crimsons going well with yellow, but very badly with pink and rose shades, though apricot tints and white, if desired, associate with these.

The Plant-Houses.

Fuchsias.—These are now growing apace, and repeated pinchings will be required to form bushy plants for late summer flowering. Those in medium pots may also need shifting to larger ones, using as compost rough rotted turf and a fair proportion of rotted cow-manure.

Double Violets.—It is quite safe to take rooted pieces of these and plant them in an open quarter to produce flowering plants for next October. Though hardy, unless they have been exposed in the frames for a week or ten days previously, the young stuff may suffer from morning frosts; a mat or two thrown over the beds at nightfall will prove an efficient protection.

Rhododendrons, such as Countess of Haddington, Duchess of Buccleuch and veitchianum, just out of flower should have the seed-vessels removed and any extra strong growths of the past season cut back. Those requiring extended root space may be repotted now. They succeed splendidly in the siftings of Orchid peat, as well as in that of a less porous nature, and also in light, fibrous loam.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

THE KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Brussels Sprouts.—These are probably the most highly appreciated of all the members of the Cabbage family, and growers endeavour to have a constant supply over the longest possible period. With the object of securing early buttons, planting may be done immediately if the youngsters are in condition and space is available. It is essential that the ground shall be deep and in excellent heart, but looseness must be guarded against, as it tends to encourage open, unsatisfactory buttons. If large varieties are grown, a distance of 3 feet in all directions must be allowed; but the smaller growers will be satisfied with 6 inches less each way, and it is more than probable that they will yield an equally heavy crop, and the quality is invariably superior.

Potato Planting.—In the majority of instances this important task will be finished before these notes are printed, but it is in no sense too late to plant; indeed, in many soils the results from planting early in May are better than those from April planting. The varieties to be dealt with will be late ones, to produce tubers for keeping right through next winter, and plenty of space is imperative between the rows, as the growth is strong. As a rule, 33 inches answers from row to row, with 15 inches from set to set in them; but occasionally it is wise to allow 36 inches between the lines, the distance in them remaining the same. Sets ranging from 2½ oz. to 3 oz. in weight are usually the best, and they may be 4 inches down in heavy land and 6 inches in light soils. Planting in drills is always preferable to doing the work with a dibber, though the latter is rather quicker.

Salsify and Scorzonera.—These tap-rooted vegetables are not as generally grown by amateurs as they might be. One would not suggest that large quarters should be devoted to them, but that one or two good lines should be sown, as the roots afford a most welcome change during the winter months. The ground must be prepared precisely the same as for Carrots or Parsnips; that is to say, full reliance is placed on mechanical culture and the use of manure is avoided. The drills ought to be 1 foot asunder, and clusters of three seeds may be dropped in them at intervals of 9 inches; this is economical of seeds and reduces the labour of thinning to the minimum.

Celery Trenches.—There is little doubt that by the middle or third week of the month there will be plenty of early Celery ready for planting out, and the sooner, therefore, the trenches are prepared the better. There is a fairly widespread idea that these must be deep, whereas they should be rather shallow than otherwise. In strong soils 8 inches is quite deep enough, while in light lands another 2 inches will suffice. The bottom ought to be dug, and in some instances the generous dressing of manure that is used can be worked into it; but if not, it must be put in a layer. In the actual planting there is one point that the amateur is urged to guard strenuously against, and that is putting the roots into the bottom soil that the cutting of the trenches exposes. By far the wisest course is to put in some entirely new material for the roots; but if this cannot be managed, then a layer of top spit must be thrown in, as it will be sweet and the roots will take quickly and satisfactorily to it.

Peas.—The early Peas, both those sown outdoors and those sown indoors and planted out about the middle of April, are coming on excellently, and give promise of yielding splendid crops. It is possible that the soil will be so dry as to render watering necessary, but in no circumstances should any be given until withholding it spells cessation of progress. To reduce the necessity for giving water, keep the hoe or the fork constantly going to create a covering of dust, as this will largely arrest the waste of food-bearing moisture. Frequent successive sowings will have to be made to maintain the supply, and no efforts must be spared to provide a deep soil containing plenty of food. These plants will have to bear when the weather is at its hottest and driest, and they will revel in the cool, moist rootrun.

H. J.

ROYAL INTERNATIONAL HORTICULTURAL EXHIBITION.

Privilege to Gardeners' Societies.—The Board of Directors has decided to grant a special privilege to members of *bond-fide* gardeners' mutual improvement and similar societies. The secretaries of such societies purchasing not fewer than twenty admission tickets for the exhibition will be accorded a discount of 20 per cent. upon 1s. tickets and 10 per cent. upon all higher-priced tickets. A parcel of twenty tickets and upwards need not be composed of tickets all of the same value; in fact, it may be made up in any way convenient to the society so long as not fewer than twenty are purchased at the same time. Societies wishing to avail themselves of these facilities must apply to the secretary, 7, Victoria Street, Westminster, for their tickets on or before May 18, as no discounts can be allowed after that date.

Exhibition Cups.—Never before has there been anything like such an array of valuable cups for presentation at an exhibition of this nature. It is felt that the public should have an opportunity of inspecting the cups and plate, and it has therefore been arranged to exhibit them at the meeting of the Royal Horticultural Society on May 14 in the society's hall at Vincent Square, Westminster. In addition to this, they will be on view at the exhibition on May 22, 23 and 24, the first three days of the show.

Some of the Entries.—From the entries received it is evident that all types of Carnations will be represented in abundance. The tuberous-rooted Begonias will contribute some of the most brilliant colouring ever seen. There are three entries in a class in which each exhibit can claim an area of 200 square feet. Streptocarpuses, a race of greenhouse plants which has come into special notice during the past two years, have attracted four entries in a class for exhibits occupying 200 square feet each. In no division, however, is there more reason for satisfaction than in that for alpine plants and rockeries. Nine entries appear in the class for alpines arranged in spaces of 100 square feet, and seven entries in another competition for exhibits occupying 50 square feet. There will be at least fourteen great rockeries constructed in the open garden, seven in a class for rockeries of 600 square feet each, and seven each occupying 400 square feet. In the cut flower section Sweet Peas will figure largely, although most of the flowers will have been grown under glass, so as to be ready for the somewhat early date.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

POLYANTHUSES NOT SATISFACTORY (E. E. F.).—There is nothing in the appearance of the plants sent to indicate the cause of the trouble from which the Polyanthuses are suffering. Can you send some plants packed so that they will arrive in a moist condition, and also some of the soil in which they are growing?

SWEET PEAS (D. D. D.).—Of the varieties you name, preference might well be given to Nos. 1, 3, 6, 7, 8, 9, 12, 13, 14, 16, 17, 18; but the thing to do is to choose the finest that are available at the date of the show. The soil will answer admirably. Spare no efforts to open up the clay, and, if possible, incorporate vegetable refuse with it as well as manure.

CUTTINGS OF A TREE PÆONY (Mrs. H. W. G.).—The present would be a better time than autumn for taking cuttings of Tree Pæonies. They will be likely to give the best results if they are planted in sandy soil in a close frame and shaded from bright sunshine. If placed in a warm frame, be careful with the watering and shading, otherwise they may be scalded.

NARCISSUS BULBS DISEASED (Bulbs).—The Narcissus bulbs sent were in a decomposed condition and teeming with eelworms. They were so far gone, however, that it is impossible to be sure at this stage whether they were destroyed by these pests, whether they were damaged when they were potted, or injured by becoming too wet during the autumn, when growth should have been commencing. If they were stood outside without any means of checking water falling on the pots, it is quite likely that they have suffered from the presence of too much water.

LILY DISEASE (J. A. A. S.).—The leaves are affected by the fungoid disease known as Lily cluster-cups; but whether the bulbs or the ensuing season's flowering will suffer therefrom depends not a little upon the severity of the attack. In the present circumstances the best remedy would be to gather all diseased portions and burn them, subsequently syringing the plants, wetting both surfaces of the leaves, with a solution either of permanganate of potash or sulphide of potassium at the rate of 1 oz. to two gallons of water. By adding a little soft soap the solution will adhere more to the plants.

ANEMONE DISEASED (Wirswall).—In the dried-up condition of the plant, as received, we could not form any definite opinion as to the cause of the trouble; and whether the plant had been injured by a fork, poisoned by manure, or the victim of some fungoid attack we are unable to say. The plant certainly is occasionally attacked by fungus. In the crown of the plant there were present a few bulb mites, though not in sufficient numbers to account for the mischief done. These, however, must not be looked upon other than as a pest, and to certain types or phases of plant-life are troublesome and even dangerous. You might clear away the soil from the plants giving indications of failure, and having cut away the decayed part and burnt it, dust a little lime among the plants.

TREES AND SHRUBS.

SHRUBS AND CLIMBERS FOR A WALL (Nampitwyche).—The following shrubs and climbers are suitable for your wall: Ivy Emerald Green, Ivy aurea elegantissima, Crataegus Pyracantha variety Lelandii, Jasminum nudiflorum, Garrya elliptica (male), Forsythia suspensa, Cydonia japonica, Cotoneaster microphylla, Clematises in variety and Hydrangea altissima. With the exception of the Ivies and Clematises, the plants might be placed as mentioned. Place about seven feet apart to allow ample room. Leave out any of the plants you think proper, for it will not require all those mentioned for a wall 50 feet long. We advise leaving out Clematis if you are not very particular about including the same. The best red Lilac is Souvenir de L. Spath; a good one with pinkish flowers is Emile Lemoine. The varieties described as blue-flowered are usually various shades of lilac and purple, not shades such as you suggest. A good dark one will be found in Delphine, and Marc Micheli is a good variety with lighter-coloured flowers. You cannot do better than select Laburnum Watereri for the Laburnum you require.

PRUNING METROSIDEROS (J. P.).—It is not necessary to prune *Metrosideros floribunda* every year, although an occasional pruning is attended with good results. The work must be done as soon as the flowers fade, and it is usual to remove the branches just beyond the flower-heads and thin out the weaker shoots from the centre of the plant. During the growing season it is necessary to give stimulants in the form of weak liquid manure, and plants usually bloom most satisfactorily which are stood out of doors in full sun during summer.

TRANSPLANTING DAPHNE MEZEREUM (W. H. C.).—October is a good month to transplant bushes of *Daphne Mezereum*, although there is no reason why you should not do the work any time between the beginning of October and the beginning of February. By transplanting early, however, the plants have a good chance of becoming established before the ground gets thoroughly cold. By delaying the planting until late spring, the flowers are injured; but if you are prepared to sacrifice the flowers for one year, February is almost as good a time as October.

CYTISUS NIGRICANS (L. B. W.).—*Cytisus nigricans* is less suitable for planting on poor ground than many other kinds of Brooms, for it requires rather careful cultivation to obtain it at its best. It is likely that it would succeed for two or three years and then gradually die out. We suggest that *Genista pilosa*, *Cytisus præcox* and double-flowered Gorse be planted for preference. You would also find that the various kinds of *Cistus* and *Helianthemum* would thrive excellently in the position, and be very showy when in flower; in fact, the poorer the soil, the more satisfactory are the results, as a rule.

PRUNING SHRUBS (Era).—The following newly-planted shrubs about which you write will not require pruning this year: *Andromeda speciosa*, *Staphylea colchica*, *Zanthoceras sorbifolia* and *Styrax japonica*. *Cercalpinia japonica* may have the ends of the branches shortened by 9 inches or 12 inches, and *Buddleia variabilis* Veitchiana may be cut back hard, last year's shoots being removed to within two or three eyes of the base. The work ought to have been done six weeks ago; therefore do not delay it any longer. The first four will not require any regular pruning. Simply remove any dead pieces. The latter two shrubs must be pruned as recommended each February.

THE FINEST SPECIMEN OF ABIES ALBERTIANA (J. McNair).—Numerous large specimens of *Abies albertiana* are referred to in "Trees of Great Britain and Ireland," by Messrs. Elwes and Henry. The largest authentic specimen in the country to which reference is made is the one with which you are acquainted at Hafodunos in North Wales. When measured in 1904 this was found to be 94½ feet high and 8 feet 5 inches in girth. One at Singleton Abbey, Swansea, is said to be 110 feet high, but no accurate measurements appear to have been taken. A tree at Hemsted, Kent, exceeds ninety feet in height, one at Dropmore is between seventy feet and eighty feet high, and several trees at Penllergaer, near Swansea, are from seventy feet to eighty-five feet high.

WATER AT ROOTS OF A TREE.—I think a case has been recorded lately of water rising from the root of a Birch tree. A similar case has occurred in a London garden. The tree is a Sumach, thirty years old, but small. A damp spot appeared when the weather was dry last week, and two days ago I dug a hole a foot square, in which the water has stood constantly 7 inches deep. The peculiar part of the matter is that it stands at a higher level than the surrounding gravel walk, and in the middle of a dry, recently-dug bed. The soil is so loose that I feel sure there must be a constant supply running in to maintain the puddle. It is not credible that a small tree could supply gallons of sap; the only explanation that occurs to me is that the tap root may have got down to subsoil water, which the tree may be pumping up through some surface roots, which may have been cut when the ground was dug last winter. We had a pump many years ago; the water was 14 feet down, and has long been drained away. There has never been the slightest sign of any spring in the garden.—H. B. P., *West Brompton*. [It is quite likely that the wet places noticed in your garden are due to the recently-injured branch of a tree, or, perhaps, a root. We have known injured branches of trees, particularly Maples and Birches, make quite large puddles on the ground by the constant drip of sap at this time of the year. There is no reason to suppose that the tap root could draw water from below the ground and disperse it again as you suggest. If you were to get some local expert to examine your trees, he would probably be able to locate the reason for the excess of moisture.—Ed.]

THE GREENHOUSE.

INJURY TO CHRYSANTHEMUM LEAVES.—The leaves of the Chrysanthemums sent do not show any evidence of the attack of insect or fungus pests upon them, but they are so smothered with sulphur that some of the evidence which may have been present may well be now obscured. From what can be seen, however, we would suggest rather that these plants have suffered either from cold draughts, from some error in watering, or from being placed in too strong a soil. The texture of the leaves is very thin.

CEREUS FROM MADEIRA (West Sussex).—As the genus *Cereus* is such an extensive one, we cannot even suggest what may be the species to which you refer. We can only say that your better way will be to keep the plants in as warm and light a position as possible in the greenhouse, and give them very little water during the winter months. Providing other conditions are favourable, there is no reason why Daffodils should not do equally well in a south aspect as where they are now, and, judging from your description, we should say that the suggested position would be likely to suit them. The best time to

lift them is in July, and they should be planted with as little delay as possible. The ground must be well dug, and the bulbs should be planted in irregular drifts or masses rather than in formal lines.

INJURY TO FORCED LILIES (Ignoramus).—When *Lilium longiflorum* is hard forced, some of them often go like the specimen sent. It is most probable that there is an inherent weakness in those particular bulbs, so that they cannot withstand the additional strain of forcing. These Lilies cannot be forced for several years in succession, and those that flower after the manner of that sent need not be persevered with; at least, we had two or three behave in the same way, and as an experiment kept them till the second year, when they did no better, and were then thrown away.

DAHLIA CUTTINGS (W. S.).—An important item in the propagation of Dahlias is to obtain good cuttings, as if they are drawn up and weak, failure will most likely occur. In starting the tubers they should be just covered with soil, leaving exposed the portion from whence the new shoots will spring. Placed on a stage in the greenhouse, the shoots will grow short and sturdy, and when about 3 inches in length they make the best of cuttings. The entire shoot should be chosen for the cutting, including the somewhat enlarged base. The shoots must not be allowed to dry after being cut off the parent plant. Sandy soil is preferable to Cocoanut refuse as a medium in which to strike the cuttings. They should without difficulty strike root in a frame with a little heat; but if there is too much moisture therein, so as to set up damping, a little air on the frame for a time will prevent this. They must be shaded from the sun till rooted. As to the time the air is allowed to remain on the frame in order to dry up any superabundant moisture, we cannot say, as you will be the best judge of that, for whether the small frame is in the greenhouse or outside you do not say. At all events, the fact that the previous cuttings damped off would indicate that they were subjected to too much moisture: it may be in the atmosphere or in the soil.

KITCHEN GARDEN.

TOMATO PLANT FOR INSPECTION (L. L.).—The Tomato plant appears to lack potash. Give the plants a little each week in the water; about half an ounce to one ounce of sulphate of potash in the two-gallon can once a week will be sufficient probably. The dropping of flowers is usually due to some error in watering.

SEAKALE CULTURE (F. H.).—Your culture of Seakale under pots is altogether old-fashioned and out of date. On modern lines Seakale is planted in the form of root-cuttings each spring. New crowns are made, the roots lifted in the autumn, trimmed, and their heads blanched in warmth and in darkness, as wanted during the winter. In that way you can have 200 crowns to cut where you now may have only twenty. The proper steps to take with permanent Seakale, before covering with pots in the winter, is to see that all leafage is dead and cleared away from the crowns. You can place pots over the crowns any time during the winter; but it is well not to be too hasty, and January may generally, for small breadths, be soon enough. Of fifteen pots, you may cover one-half of the crowns in January, the rest in February; but the latter may have little mounds of dry ashes placed over them to keep off the frost. The putting of long stable manure and tree leaves, after being twice turned and mixed, over the pots, creates some warmth inside them. That is done for a very brief time, as probably such manure coverings, especially if heavy rains prevail, retain warmth but for a week or so. The next primary purpose is excluding light and air, because if these were admitted into the pots, the Seakale heads would be green and quite inedible. It is only by fully excluding both, light especially, that Seakale will become blanched and fit for eating.

MISCELLANEOUS.

MANURING DAFFODILS (Ascot).—Your conclusions are a little faulty. The best method to manure Daffodils is by way of the soil through the medium of their roots, and the requisite food should be present in the soil when the new roots are emitted in early autumn if these are to perform their proper functions. You might, of course, manure the plants now as you propose; but in so doing you would only be affording them a tonic, a sort of pick-me-up, by the way. You see, in April more than one-half of the season's work of the plant has been accomplished, roots and root-fibres, Nature's system of communication between soil and plant, having long been in operation, and upon the food supplied and the powers of the plant to assimilate it will depend the strength of the coming bulb. The new bulb now forming is the direct result of root production and a leaf development which had their beginning months ago; hence to wait till April before doing anything is to wait too long. Obviously the right time is at, or before, the planting season. The Daffodil is a deep-rooting subject, and surface-dressings in spring should take the form of liquids or rather quickly soluble manures if the plant is to receive immediate benefit therefrom.

NAMES OF PLANTS.—*B. A. I.*—*Grevillea rosmarinifolia*.—*T. W., Warwick*.—*Prunus Mahaleb*.—*F. A. B.*—*Acer rubrum*.—*M. W., Alrechurch*.—*Spiræa Thunbergii* and *Prunus japonica roseo pleno*.—*M. K.*—1, *Spiræa van Houttei*; 2, *Staphylea pinnata*.—*P. H.*—*Amelanchier canadensis*.—*Constant Reader*.—1, *Juniperus chinensis*; 2, *Populus albus*; 3, *Acer platanoides* variety; 4, *Acer platanoides*; 5, *Acer Pseudo-platanus*; 6, *Spiræa Thunbergii*; 7, *Spiræa prunifolia flore pleno*; 8, *Ulex europæus*.—*Caskgate*.—Probably *Juniperus*

bermudiana, but it is impossible to identify such a small scrap. Many of the Junipers and Cupressus change in character with age.—*Mrs. B., Wareham*.—*Erica mediterranea*. The Tulips are garden forms of *Tulipa gesneriana*, unable to match.—*D. E. S.*—*Prunus japonica flore pleno*.

SOCIETIES.

WARGRAVE AND DISTRICT GARDENERS' ASSOCIATION.

THE last meeting of the session took place on Wednesday evening, April 17, when there was a good attendance of members. The subject for the evening was "Chrysanthemums," and Mr. C. Foster of Parkwood Gardens, Henley-on-Thames, dealt with it in a very practical way. He referred to exhibition, bush and outdoor plants, giving special and minute directions for their successful culture. At the close a unanimous vote of thanks was accorded Mr. Foster, who suitably replied. A good discussion ensued, many of those present taking part. There were some noteworthy exhibits, that of Mr. E. Feltham of the Wargrave Hardy Plant Farm, Limited, being of exceptional merit, showing what can be done with plants of the hardy section. Mr. Gray showed three vases of Roses, and Mr. Howe some finely-grown *Acalypha Sanderi*, and each received the society's certificate of cultural merit.

GLAMORGAN DAFFODIL AND SPRING FLOWER SOCIETY.

THE ninth annual show of this society was held at Bridgend on Wednesday, April 17. As in the case of so many shows this spring, the blooms in the Daffodil classes were nearly all past their best; but the hardy spring flowers, Rhododendrons and flowering shrubs were a beautiful sight, and reached a high standard of quality. Space will not allow of a description of every prize-winning exhibit, but one or two flowers deserve special notice.

An award of merit was given to two seedling Rhododendrons shown by W. G. Vivian, Esq. One was a flower the colour of which is difficult to describe, nearly white, but heavily tinged with bluish pink, very lovely. The truss is perfect, each pip being clearly formed. The other flower was like a large and much-improved *R. niveum*, the petals more rounded and a good truss, the colour being a purple mauve.

Sir John Llewelyn also secured an award of merit for a fine seedling Rhododendron of brilliant crimson colouring.

Among the Daffodils were several seedlings which, had they been in fresh condition, would probably have been worthy of awards of merit. There was, however, one award given to a lovely little triandrus seedling, with white perianth and lemon cup, exhibited by C. H. Cave, Esq., in his first-prize group of seedling Daffodils not in commerce.

We should like to make the suggestion that the society should adopt the Royal Horticultural Society's Classification of Daffodils (1910 edition) for the purposes of the next schedule. This classification may not be a perfect one in some ways, but it is very convenient both for exhibitors and judges at shows; and although some few varieties may be re-classified in future editions, the scheme is not likely to be altered.

Messrs. Barr and Sons had a good group, including several fine varieties of new Daffodils and some Tulips.

Messrs. Cartwright and Goodwin also exhibited many of the more moderate-priced sorts in good condition and well arranged.

The following is a list of the principal prize-winners:

OPEN CLASSES.

Collection of Daffodils: First, Mrs. Ridley; second, Mrs. Moore Gwyn; third, Mrs. Booker.

Group of seedlings: First, C. H. Cave, Esq.; second, Miss Ida Pope; third, Sir John Llewelyn.

OPEN TO MEMBERS.

Collection of twenty varieties: First, Sir John Llewelyn; second, Mrs. Godfrey Clark.

Collection of twelve varieties: First, Mrs. Williams; second, Mrs. Godfrey Clark; third, Mrs. Ebsworth.

Collection of fifteen varieties: First, Mrs. Ridley; second, Mrs. Godfrey Clark; third, Mrs. Moore Gwyn.

Collection of fifteen varieties: First, S. H. Byass, Esq.

Collection of twelve varieties (novices): First, W. B. Hallows, Esq.

Six Magni-Coronati Daffodils: First, Mrs. Mackintosh of Mackintosh.

Six Medio-Coronati Daffodils: First, B. R. S. Pemberton, Esq.

Six Parvi-Coronati Daffodils: First, B. R. S. Pemberton, Esq.

Single bloom of Magni-Coronati Daffodil: First, Mr. Caleb Bryant.

Single bloom of Medio-Coronati Daffodil: First, S. T. Colville, Esq.

Single bloom of Parvi-Coronati Daffodil: First, Mrs. John Nicholl.

Four Poetaz Narcissi: First, Mr. Caleb Bryant.

Bowl of Daffodils: First, Mrs. H. Prichard.

Basket of spring flowers: First, Miss N. Prichard.

Six Hyacinths: First, Mrs. Oliver Jones.

Six Primulas (plants): First, Sir John Llewelyn, Barr.

Group of Rhododendrons: First, W. G. Vivian, Esq.

Six Rhododendrons: First, W. G. Vivian, Esq.

Group of flowering shrubs: First, Miss Talbot.

Six jars of flowering shrubs: First, S. H. Byass, Esq.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Fruit Blossom and Frost.—In last week's issue of *Country Life* there is a most interesting article dealing with fruit prospects for the current year, the opinions of professional growers in all parts of the country being included therein. Generally speaking, the frost does not seem to have done as much damage as in some previous years, except with early Plums, no doubt owing to the absence of moisture. In America the protection of flowering orchards from frost by means of smudge fires is largely adopted, but for some reason or other does not appear to find favour with fruit-growers in this country. It has, we believe, been tried by a few growers, but not with any large degree of success. It would be of considerable interest to fruit-growers throughout the country if those who have tried this system, or seen it tried, would give their opinions for or against it, and we shall be pleased to publish letters on the subject.

An Interesting New Zealand Shrub.—Although rarely met with outside botanic gardens, *Corokia* *Cotoneaster* is sufficiently showy to be brought into general use. In the South and South-West Counties it would thrive in the open ground, while in less-favoured localities it is worth a position against a wall. Belonging to the *Cornus* family, it forms a dense bush of small, twiggy branches, which are rather sparingly clothed with small, rounded, dark green leaves which have a silvery under surface. The yellow, star-shaped flowers are produced during the latter part of April and May. They are nearly half an inch across, and are succeeded by small, oval, orange scarlet fruits, which ripen in autumn. It thrives in loamy soil, and also succeeds in a compost containing peat. Cuttings of young shoots inserted in sandy soil in a close propagating-case may be rooted during the summer. A well-flowered example is to be seen growing against a wall with a southern aspect near the Water Garden at Kew.

The New Railway Bill and the Horticultural Trade.—The new Railway Bill introduced by Mr. Sydney Buxton and now before the House of Commons will, if passed in its present form, hit the nursery, fruit and market garden trades very seriously. In the Railway Bill of 1894 it was stipulated that a railway company, before increasing its rates for goods, should satisfy its customers that such increase was reasonable. The present Bill, however, enables the railway companies to increase their rates where it is necessary to meet increased expenditure, and in the second clause states that "it shall lie on the complainant (*i.e.*, the customer of the company), notwithstanding anything in the said section, to prove that the increase is unreasonable." This, of course, is

quite impossible, unless the complainant can have access to the railway companies' books. Sections III. and IV., dealing respectively with experimental rates and packing, are also calculated to seriously affect the horticultural trade if passed unamended. Copies of the Bill can be obtained from Messrs. Wyman and Sons, Fetter Lane, London, price 2d., and we advise all connected with the nursery and market gardening industries to read it carefully and communicate with the Secretary of the Joint Railway and Parliamentary Committee, Tavistock Hotel, Covent Garden, London, W.C., for fuller particulars.

New Hybrid Saxifrages.—One of the most interesting exhibits at the last meeting of the Royal Horticultural Society was the beautiful and unique collection of hybrid Saxifrages staged by Mrs. Lloyd-Edwards. These were mostly of the Mossy section, and several varieties were really magnificent. For instance, *sanguinea* *superba* was the richest colour of its kind we have ever seen. The newly-opened flowers are rich, glowing scarlet, the colour fading somewhat with age. *Rose Beauty*, with bright rose flowers of medium size and compact habit, and *Queen May*, pure white, flowers large, were two others of exceptional merit. Then there were two in the raising of which the British Saxifrage, *Saxifraga granulata*, had been used as a parent. One of these was named Mrs. J. F. Tottenham, and is illustrated on page 232. As will be seen, its habit is compact and good, and the flowers are large, of good form and pure white. The other was taller and had flowers more star-shaped and white. This was named *Comet*.

A Beautiful Burmese Tree.—Visitors to Kew during the next week or two should not fail to visit No. 1 House, near the Main Gate, to see *Amherstia nobilis*, a beautiful Burmese tree, in flower. Upwards of twenty feet high, the specimen in question has a wide-spreading head clothed with large pinnate leaves. At the present time a large number of pendent racemes of scarlet, yellow-tipped flowers make the tree one of the lions of the gardens, for not only are the individual flowers of good size and showy colour, but they are borne, six to twelve or more together, in racemes up to a foot or more long, which are suspended from long, slender stalks. Unfortunately, it is only in large, lofty structures that it can do itself justice; therefore it is not a tree to recommend for general cultivation. Where a large glass-house exists in which a stove or tropical temperature is maintained, however, it might well be included among the occupants. It is said to have been originally introduced in 1837, and to have been first flowered by a Mrs. Lawrence in 1849. The name of *Amherstia* was given in honour of Countess Amherst.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

The International Exhibition.—As most of our readers are aware, the Royal International Horticultural Exhibition is to be opened by Their Majesties the King and Queen at the Chelsea



MESSRS. JAMES CARTER AND CO.'S JAPANESE GARDEN AT THE CHELSEA HOSPITAL GROUNDS.

Hospital grounds on the 22nd inst., and promises to be the biggest of its kind ever seen in this country. We shall be pleased to receive from exhibitors from now onwards particulars of their exhibits, more especially descriptions and photographs of any new flower, plant, fruit or vegetable that they may be showing. The largest tent that is in course of erection is for plants; it measures between 600 feet and 700 feet in length and has a total width of about two hundred and eighty feet. The area of this tent alone is about three and a-half acres, or twice the floor space of Olympia. The special tents for France, Holland and Belgium are each 470 feet by 40 feet. For cut flowers there are two tents, one 600 feet by 40 feet, and the other 380 feet by 35 feet. The Orchid tent, which is 250 feet by 70 feet, will be heated day and night by means of hot-water pipes. Leading from the Orchid tent is to be an annexe 140 feet by 70 feet for fruit and vegetables. To generate the electricity for lighting purposes, a 300 horse-power engine is being installed, and the grounds will be illuminated every night during the show. We understand that there will be more individual lights than are in use at Liverpool Street Station. The two illustrations on this page will give readers an idea of the work that is now proceeding at Chelsea.—H.

The Double-Flowered Gorse.—I can very fully bear out all that is claimed for this plant in THE GARDEN, page 201, issue April 27. In Hampshire, especially in the New Forest district, there are scores of acres of Gorse growing in shallow, stony soil and on hot, dry banks. As stated in the article I now refer to, the plants get very leggy, and it is necessary to cut them down at stated intervals in order to keep the face of the bank well clothed. In some gardens, however, the double-flowered Gorse is grown in groups on dry banks with great success. I have seen strong, sturdy specimens growing well year after year in a rooting medium of gravel and peat not more than 6 inches deep on a bed of gravel. A stock of young plants should be raised every four or five years to replace those that may not be thriving satisfactorily. If the tips of the young shoots are

cut off about three inches long and inserted half their length in a firm bed of very sandy soil in a cold frame facing the north, they will soon root and grow into neat little bushes.—AVON.

Hardiness of *Coronilla glauca*.—A recent note in THE GARDEN spoke of a plant of the above having wintered out of doors at Chelmsford. Since then I have seen three or four specimens in a fairly open garden at Frinton-on-Sea, which must be unique for East Anglia. These have been outside for several years, and the largest specimen now measures quite 5 feet in diameter. It is fully a yard in height, and is growing on a rather dry bank. Its perfectly-rounded head is now clothed with thousands of flowers, which on a sunny morning in April made a glorious display of colour.—C. WAKELY, Chelmsford.

Exhibiting Daffodils.—I am glad Mr. Jacob has entered this discussion, page 191, issue April 20, and I think we are now in a fair way towards some solution of this somewhat vexed question. There is no

doubt we all had the trade groups in mind when we approached the subject, though I think there is plenty of room for artistic arrangement in the competitive classes also, without the chaos and the doubly confounded confusion which Mr. Jacob is so much afraid would follow any attempt at tasteful arrangement. I always like to see the competitive exhibits set up with some idea of helping to add to the general tasteful effect of the exhibition, and I have never felt the least little bit inclined to scratch my head until baldness followed, nor sink into the depths of profound perplexity, merely because the exhibits I have been asked to adjudicate on have not been set out with geometrical precision. The danger to avoid is the tendency towards ignoring all but the flower. I want to see the stem cut full length, and I want to see the blooms staged as grown, unfaked, unbecoloured and unthumbed. I would disqualify flowers that had been in any way manipulated, as I feel that this is all-important for the future welfare of the Daffodil, for the reason that it is sometimes very difficult for even an experienced hand to detect whether that extraordinarily flat crown you see is really as the flower would grow naturally, or whether the exhibitor has yielded to the temptation of flattening it out with his thumb. I have heard several well-known exhibitors, and, alas! judges too, say that they see no objection to this manipulation. So I am afraid it will be by the force of public opinion only that such practices, which I consider amount almost to dishonesty, will be stopped. Another point I wish to express my views upon is the class of flower which is considered worthy of a certificate or an award of merit by the various societies. Some excellent things come up for

awards, but how often does one hear the remark passed about a flower, "Oh, yes, it is a nice thing, but it is not a show flower!" What do the general public care whether a variety is considered to be a show flower according to our advanced ideas, so long as it is a good garden plant and useful for cutting and general decorative purposes? and what is the use of an award except as a guide to the general public? I am afraid we have got on the wrong track, and the sooner we turn back the better. I contend that no award should be given to any variety, however perfect the bloom may be from our show point of view, unless it is a good garden plant and useful for decorative and market purposes; then we should be helping the people who will sooner or later be using our new Daffodils instead of in many cases misleading them. Mr. Jacob says it is not so much whether we are to have tasteful arrangement, but what that tasteful arrangement shall be. I say that directly you begin to lay down rules as to how one is to arrange one's flowers, then you take the first step in the wrong direction. Give points for arrangement and let each exhibitor exercise his or her own taste, and you will soon find that those who are lacking will copy those who have the happy gift, for the very reason, if for no other, that they will lose points if they do not. The things that really annoy me are those wretched paper collars used to keep the perianth segments from reflexing. I have even seen them shamelessly left on the flowers during a show. More often, of course, they are left on until the last moment to keep refractory flowers from going all shapes, and are taken off just before the judges come round. I have seen flowers arrive at a show trussed up to such an extent with cardboard and stamp paper that very little of the perianth was visible, looking every bit as if some amateur enthusiast had been practising first aid on them. There is certainly great need for some definite pronouncement on this point. No one in his serious senses can surely wish to see



THE LARGE TENT AT THE "INTERNATIONAL" IN THE COURSE OF ERECTION.

the blooms exhibited "as it were on a paper"! and I cannot see why our Daffodil wares should not be exposed for sale "on the grand bank of harmonious beauty," each flower adding to the general artistic effect of the whole exhibition. I would like to hear more of what the public think about it.—W. A. WATTS. [We should be glad to hear the opinions of other readers on this subject, but notes should be brief.—ED.]

Potentilla Valderia.—I must have grown the little *Potentilla* known by this title for well-nigh thirty years, but it was some time before I was able to trace its name, and it is not yet too well known, rarely occurring, for example, in catalogues. It is a neat little species, with white flowers (said to be "yellowish white" in the "Dictionary of Gardening," but this is, I think, a little too depreciative of the colour, which is a fairly good white) and neat little leaves, which are variegated green and yellowish and silvery white. The flowers are somewhat sparse, but the foliage is decidedly pretty, even to those who do not, as a rule, approve of variegated-leaved plants. A small mass of this *Potentilla* looks quite silvery in its tone, and is set off by the white flowers. It is a native of the mountains of Piedmont and other parts in the vicinity, and is quite hardy with me. I have here a plant, apparently a seedling, which has not the variegated leaves of that which I was told was the type, and is the one mostly in nurseries. Probably the green-leaved one should be the typical plant, and my seedling is really a reversion to that. It will do on a dry position, but seems to prefer a considerable amount of moisture. It is readily increased by division.—S. ARNOTT, *Dumfries*.

A Rare Italian Cowslip (*Primula Palinuri*).—This is a handsome, vigorous-growing species from Italy, where it grows in the chinks of rocks on the Neapolitan Apennines above Cape Palinuro, whence it takes its specific name. Although coming from such a southern locality, it is hardy in this country when planted high up on the rock garden in the fissures of rocky boulders, or in thoroughly well-drained stony soil. When planted on the level or in a sloping position, as in the illustration, the plants should have the protection of a piece of glass during the winter months. When planted in vertical fissures, such protection is not necessary except in very severe weather. It is one of the earliest members of the family to flower, producing its umbels of drooping yellow, Cowslip-scented flowers in March. The flowers are peculiar in that they are seldom fully expanded, always being in a half-opened condition, as shown in the illustration of a plant flowering during the latter end of March. In its native home it is said to be somewhat rare, and, owing to the attentions of collectors, is in danger of being exterminated. But it is of very free habit, and readily increased by means of offsets, which are produced freely when the plant is well established. *P. Palinuri* grows best in a half-sunny position planted in a loamy soil. It makes long, stout stems, which in time reach a considerable length. If too long to be earthed-up with soil, the tops can be taken off and potted up, when they will readily make roots if treated as cuttings.—W. I.

FORTHCOMING EVENTS.

May 13.—United Horticultural Provident and Benefit Society's Committee Meeting.

May 14.—Royal Horticultural Society's Meeting and Tulip Show. Seventh Masters' Memorial Lecture at three o'clock by Professor I. Bayley Balfour, F.R.S., V.M.H., on "Gardening and Drought." Devon and County Show at Plymouth (three days).

May 15.—North of England Horticultural Society's Meeting at Leeds. Lecture on "Electricity in Relation to Horticulture," by J. H. Priestly, Esq., B.Sc. Paris Spring Show (eight days).

May 16.—Manchester Orchid Society's Meeting.

THE ROSE GARDEN.

THE BEST BEDDING ROSES.

TO many who cultivate Roses purely as garden flowers, the article on bedding Roses by Mr. H. R. Darlington will be the most interesting of the many good things to be found in the National Rose Society's Annual for 1912. This Annual is, in our opinion, the best the society has ever published, and this is saying a great deal when we consider the interesting and instructive numbers that have preceded it.

For the purpose of the article now under notice, the secretary, Mr. E. Mawley, solicited the opinions of experienced rosarians, both amateurs and trade growers, on the subject. The lists thus obtained were handed over to Mr. Darlington for classification, and the two dozen which obtained the most votes are arranged in sections, according to

Rose we would, in company with Dr. Williams, prefer General Macarthur, especially for autumn display. With us it has always proved much the freer blooming of the two, and its habit, constitution and fragrance are excellent. True, its flowers are not so perfect in shape as those of Richmond, but this is not a great drawback in a bedding Rose. On the other hand, he does not think much of Frau Karl Druschki as a bedding Rose. Certainly it is not one for a small bed, but it is excellent for a white display when planted in a large bed and its long growths pegged down. Owing to its lack of fragrance, it is a Rose that we would not grow in quantity in any form.

As already stated, this article is only one of many that are to be found in this excellent Annual, which reflects the greatest credit on the secretary, who has acted as editor, and his contributors. Copies can be obtained by non-members of the society, price 2s. 6d. post free, from Mr. E. Mawley



AN INTERESTING ITALIAN COWSLIP (*PRIMULA PALINURI*).

their height. These are as follow: Dwarf—Jessie, Fabvier, Cecile Brunner, Mme. Jules Grolez, Mme. Ravary, Mrs. W. H. Cutbush, Augustine Guinoisseau, Comtesse du Cayla and Richmond; medium—Ecarlate, Gustav Grunerwald, Prince de Bulgarie, Joseph Hill, Lady Ashtown, Mme. Abel Chatenay, Caroline Testout, Mrs. E. G. Hill, Mme. Léon Pain and Pharisæer; tall—Irish Elegance, Grüss an Teplitz, La Tosca, Frau Karl Druschki and J. B. Clark. Mr. Darlington points out that some of these varieties were placed in one section and some in another by the various compilers of lists, so that he had to base his own judgment on plants growing in his own garden last year.

In the detailed descriptions given of each variety, Mr. Darlington makes it clear that some of the varieties included are not the best for the purpose, and, indeed, it is doubtful if the list is one that any single grower would consider the best. At the same time, it is exceptionally valuable as a guide, inasmuch as it is the combined opinions of the best growers in the country. Nevertheless, everyone will not agree with Mr. Darlington's ideas of these Roses. Of Richmond, for instance, he has a very high opinion; but for a bedding

Rosebank, Berkhamsted. It is a book that no Rose-lover ought to miss.

THE ROSE GARDEN IN MAY.

By this time Roses should be in active growth, and one of the main things is to keep them healthy and clean. Unfortunately, the extreme changes of atmosphere so frequently experienced at this date have a bad effect upon young Rose growth, while they also seem to increase the plague of insect foes.

Mildew has already been dealt with, but the free use of Cyllin Soft Soap and the other remedies advised for mildew will also have a great tendency to check insect enemies. Among the first of these are the Rose maggot and caterpillars. Wherever one finds the young leaves curled unnaturally, it is almost certain to be the work of some grub or caterpillar. I do not know of any more effectual remedy than hand-picking in this case, and it persisted in for a time at first, this will generally be successful. But one must begin early, or the mischief is so great that the bulk of one's first crop is spoilt.

A little observation will soon enable any grower to tell at a glance whether the curling of young

foliage is natural or caused by the leaf-rolling maggots. Nor must one go to work in a rough manner when searching for these troublesome pests, as they are wonderfully sensitive to touch and vibration, often slipping away from one shoot while you are busily hunting over another. The least disturbance causes them to forsake their hold and drop to the ground by means of a silken thread, either ascending by this when all is quiet once more or crawling up the stems should their line of communication be broken. I have found it a good plan with standards to tap the stem smartly and look out for the enemy as they seek safety by falling. But you must be quick in this work. Our feathered friends are very useful here, and I have often seen the much-maligned sparrow busy among both maggots and green fly.

Syringing with any of the insecticides I will mention later is also very distasteful to these maggots, and will eventually stop them. But this is not often done until after much mischief has resulted, so I prefer early hand-picking combined with a free use of the syringe.

Perhaps I may be allowed to digress a little here and advocate the much freer and earlier use of reliable washes than is generally the case. I am convinced we might escape much harm by syringing, even before any apparent cause for such exists. Prevention being better than cure may well be applied here.

Our main insect enemies just now are maggots and green fly. Neglect these for a short time, and they will assuredly take the chief charm from the first and main crop of bloom. If it has to be done, why wait until the effect of applied remedies is almost nil? Numbers of reliable insecticides are offered in these pages, so one can choose for himself. I do not propose extolling one over another; all are undoubtedly good, or they would not pay for repeated advertising. But I would like to point out that Cyllin Soft Soap at the rate of 1 oz. to a gallon of soft water is perfectly safe, cheap, and may be used freely enough to allow of thoroughly cleansing the foliage. Short strokes with the ordinary syringe or a good stock of elbow-grease behind the Abol

Syringes will work wonders. Do not imagine you are window-washing, however; but afford short, sharp jets of spray, and see that the bottom of the foliage is also reached by any insecticides.

Under glass we are not usually troubled with maggot, except in the case of a few Hybrid Perpetuals having especially sweet foliage; but thrip and red spider will put in an appearance should the atmosphere be allowed to become unduly dry for a short time. Much of the health among Rose foliage is secured by judicious moisture in the atmosphere as well as at the roots. We have a great aid when combating insects under glass in the facility afforded for fumigation, which could not be carried on in the open. On no

account overdo the fumigation. If the first application is not entirely successful (which it seldom is), fumigate again the following night, but do not increase the strength of the fumes much. A little thought will show the folly of too extreme measures. You cannot well wash or fumigate sufficiently strong to kill insects and eggs at the same time. It is the newly born or hatched insects that show life in the morning, and a morning syringing is very effective here. A slight fumigation, followed by a good syringing in the morning, and this done on two or three successive nights, will have a wonderfully cleansing effect without the risk of injury so many court by using stronger

many Roses has been commented upon in our pages on various occasions, we do not ever remember the subject being dealt with so fully as Mr. Darlington did on the occasion in question.

Unfortunately, he based his remarks almost entirely on Rose species and their hybrids, many of which are not suitable for cultivation by the average amateur, though, where plenty of space is available, there is no reason why such as *rubra folia*, *sericea*, *sinica* Anemone, Brunonis and the Macartney Rose should not be grown. Indeed, their inclusion would add very considerably to the interest and beauty of the garden.

The lecture was, however, of considerable value to the amateur, inasmuch as it opened up the whole question of the cultivation of Roses as ornamental shrubs from the standpoints of flowering, handsome foliage and artistic fruits. As those who cultivate Roses on an extensive scale know, there are a great many varieties which come under one or more of these headings, and a number of these were mentioned by Mr. Darlington as well as by those who took part in the subsequent discussion. Thus in the climbing section the lecturer mentioned Alberic Barbier, Aimée Vibert, Tea Rambler, Ariel and American Pillar as some of the best foliage Roses, and, of course, they are all good as flowering plants. The Sweet Briars also Mr. Darlington wisely drew attention to, and undoubtedly these should be planted more freely than they are for the sake of their fragrant foliage.

In the discussion which followed, Mr. James Hudson, V.M.H., gave the names of a number of good garden Roses that might be grown as large bushes either on account of their free flowering or ornamental foliage. Among these were Conrad F. Meyer, Noella Nabonnand, Frau Karl Druschki (which, he said, could be had in flower early if the growths were merely thinned out and not pruned) and Zepherin Drouhin. Mr. George Laing Paul advised the crossing of the Macartney Rose with *wichuraiana*, a cross which he thought would yield a good new race of Roses.

At the present time the shoots and foliage of many of the Hybrid Tea and other dwarf Roses are very beautiful. In our own garden we are particularly pleased with Margaret, which has intense crimson foliage and shoots; White Killarney, stems and spines red and foliage green, tinted red; Miss Cynthia Ford, almost similar to the foregoing; General Macarthur, deep red; Zepherin Drouhin, a charming shade of light red; Grüss an Teplitz, green, tinted red; Alberic Barbier, glossy green; and Marquise de Sinety, deep rose. This question, which is often overlooked, is of the greatest interest to rosarians, and we should be pleased to have short notes about other beautiful-foliaged varieties from our readers.



THE YELLOW-FLOWERED CHERRY, *PRUNUS SERRULATA FLORE LUTEO PLENO*. (See page 229.)

measures, whether in fumicides or washes. It is steady, safe and early action that tells in keeping Roses clean. A. P.

THE DECORATIVE VALUE OF ROSE FOLIAGE.

A NEW aspect in the cultivation of Roses for decorative purposes was brought before the members of the Horticultural Club at their meeting last week, when Mr. H. R. Darlington, a well-known amateur rosarian and a vice-president of the National Rose Society, lectured on "The Rose as a Decorative Plant," with special reference to the foliage. Although the beautiful foliage of

TREES AND SHRUBS.

THE LABURNUMS.

THE two commoner kinds of Laburnum occupy, with the double-flowered Thorns, probably the most important position among the smaller flowering trees, for there are few places where they will not grow, and it rarely happens that they fail to flower well. Moreover, they are inexpensive and within the reach of everyone, for a nice young tree may be obtained for a shilling which will doubtless blossom the first year after planting. Light or heavy soil is suitable, and as fine examples may be noted in northerly parts of Scotland as in Southern England. Species of Laburnum are readily increased from seeds, which are ripened in quantity most years, but the numerous varieties have to be grafted on to stocks of the common kinds. Although the Laburnums are most satisfactory as free-grown trees, some people train them into arches and weave the young branches so as to form an arbour. They stand the treatment well, but plants of climbing habit would look more in place.

Although the wood of the Laburnums does not occupy a prominent position among commercial timbers, it is very ornamental and takes a high polish. The pale yellowish sapwood offers a decided contrast to the heart-wood, which is dark brown or almost black. It is sometimes used for turning and for inlaying. The kinds available for planting are as follow :

Laburnum alpinum, or the Scotch Laburnum, is a native of Europe, growing at least 20 feet to 25 feet, and forming a shapely, bushy-headed tree with three-parted leaves considerably larger than those of the common Laburnum. It blossoms towards the end of May or the beginning of June, two or three weeks later than *L. vulgare*. Nurserymen have selected a number of more or less distinct forms for varietal names. Some of these are: *autumnalis*, which often produces a second crop of flowers in autumn; *biferum*, with divided leaflets; *fragrans*, with sweet-scented blossoms; *hirsutum* and *pilosum*, with hairy leaves.

***L. vulgare*, or the Common Laburnum,** also a European tree, is probably the most widely grown of all flowering trees. Though often met with from 15 feet to 18 feet in height, it not unfrequently attains a height of 25 feet, and sometimes more. Its racemes of yellow flowers are familiar objects during early May, and there are few gardens which do not contain one or more trees. As is the case with the Scotch Laburnum, it possesses many varieties. These differ from the type either in habit, size of inflorescence or shape of leaf. The more showy ones are *Alschingeri*, *Carlieri*, *jacquinianum* and *linneanum*. *Foliis aureis* has yellowish leaves; *involutum*, *monstrosum cristatum* and *quercifolium*, more or less deformed or abnormal foliage, neither one being of any decorative value; while *sessilifolium* is interesting on account of its leaves often being sessile, the peculiarity, however, not always being constant.

L. caramanicum is a curious shrubby plant from Asia Minor, which more closely resembles a *Cytisus* than the ordinary Laburnum. It has small three-parted leaves, and bears its yellow flowers in terminal inflorescences about the end of August and early September. It can hardly be recommended as a plant for general cultivation.

L. Adamii has commanded a great deal of interest ever since its appearance upwards of eighty years ago. It originated as a graft hybrid between *L. vulgare* and *Cytisus purpureus*, the former having been used as a stock for the latter. The hybrid possesses the peculiarity of bearing two distinct kinds of branches and leaves and three kinds of flowers. Ordinary Laburnum branches and leaves, and branches and leaves similar to those of *Cytisus purpureus* are borne, while racemes of purple and racemes of yellow flowers and ordinary flowers of *C. purpureus* are produced.

istic of being quite distinct in colour from any variety in cultivation. That it is free-flowering may readily be gathered from the young but profusely-flowered tree shown in the illustration on page 228. This tree is growing at Kew, where it was in full flower for the greater part of April. The botanical designation of this obscure variety, it should be added, is *Prunus serrulata flore luteo pleno*. We prefer, however, to call it the Yellow-flowered Cherry, and as an interesting and beautiful tree it should be represented in all gardens where trees and shrubs are treasured.

THE FLOWER GARDEN.

THE AMERICAN WOOD LILY.

TRILLIUM GRANDIFLORUM is a little unfortunate in that it possesses a superfluity of common



THE PINK-FLOWERED WOOD LILY, *TRILLIUM GRANDIFLORUM ROSEUM*, IN THE ROCK GARDEN.

L. Parksii is a hybrid between *L. alpinum* and *L. vulgare*. In general appearance it most closely resembles the former. Its most prominent feature is its long inflorescences, which sometimes attain a length of 1 foot or more. This peculiarity is shared by a variety named *Latest* and *Longest*. Inflorescences of this 17 inches in length have been measured.

L. Watereri claims the same parentage as *L. Parksii*. It may be described as a glorified Scotch Laburnum. The inflorescences are borne with the greatest freedom, and are larger than those of either parent.

THE YELLOW-FLOWERED CHINESE CHERRY.

ALTHOUGH introduced nearly twenty years ago, the yellow-flowered Chinese Cherry still remains a little-known and rare flowering shrub. The flowers, which are double, are light yellow, tinted buff, and the variety possesses the unique character-

names, for not only is it known as the American Wood Lily, but also as Wake Robin, Indian Shamrock and Three-leaved Nightshade. It is a native of North America, and belongs to the Natural Order Liliaceæ. For naturalising in shady places it is quite well adapted, and when grown in the natural leafy soil of old woods it increases rapidly. A deep and well-drained bed of peaty soil is likewise suitable for this plant. The flowers of the type are very chaste and snow white, fading to a pale rose with age. The variety shown in the illustration is that known as *T. grandiflorum roseum*, the flowers being of a rosy hue, becoming darker after expanding.

SWEET PEA NOTES.

Training.—Whether the plants are under culture for the production of blooms up to exhibition standard in the keenest competition, or whether they are wanted to produce almost unlimited supplies of flowers for beautifying the garden and

the home, a considerable amount of training is demanded. The haphazard system of throwing in the seeds, ramming in the stakes and trusting to a beneficent Providence was all very well in the good old days, which no one among us wants to see again; but it will not do now. The judicious reduction of main shoots and the suppression of laterals are undoubtedly advantageous from every point of view, and no grower worthy of the name will begrudge the time required to carry out the details. A tie here and there, too, will often spell the difference between complete satisfaction and partial failure, and must, therefore, be given according to judgment.

Feeding.—The tendency is undoubtedly to commence this too early in the season. If the soil is thoroughly worked to commence with, and rotten natural manure is incorporated at the same time, with some artificial fertiliser two or three weeks in advance of sowing or planting, there should be an abundant supply of food in the ground to last the plants until the buds are well advanced, and until that stage is reached special feeding should not be attempted. The practice of pouring strong liquid manure on the soil before the roots have become much more than comfortably established is sure to lead to sappy growth if the plants have the power to imbibe the food, and if they have not, the probabilities are that it will sour the ground and thus ruin the roots. When the plants are in full vigour, by all means feed if it is necessary, but let the manure tub alone until it is quite certain that the supply of food in the soil is not sufficient to meet the proper requirements of the plants.

Surface Cultivation.—With a view to conserving the moisture and the food in the soil there is nothing equal to incessant surface stirring. Given a good depth of perfectly friable soil that is moderately firm, it is astonishing how long the supply of water will last, and this, of course, means that the plants will continue in steady growth. The thing is to prevent any loss of moisture, and to this end hoeing or pointing over with a fork is resorted to. As far as the maintenance of excellent health in the plants is concerned, this is far preferable to constant watering, and I am quite sure that if more surface cultivation were done and the water-pot were used less, the results achieved would be far more satisfactory from every point of view. It is well, when this task is in hand, to give a fall towards the stems in light soils, and slightly from them in heavy, wet ground. This must be accepted as a broad, general principle, which will vary somewhat with the particular conditions of each garden and the weather which prevails at the time. Anyway, no matter what else may be done, never fail to keep an inch of fine soil on the surface.

Mulching.—No one can question for one moment the immense benefits which healthy, vigorous plants derive from mulchings of manure; but it is possible for harm as well as good to accrue. It is rarely wise to mulch before the end of the present month, as the tendency of the dressing is then to prevent the free admission of fresh air into the ground; but if the material used is kept constantly open by stirring with a fork, this danger can be reduced. At the end of May or the beginning of June, however, the ground will have become nicely warmed, and a thick covering of short manure



THE NEW ALPINE AURICULA ROXBURGH.

will be excellent, since an appreciable amount of food will be provided at a time when the plants have plenty of power to secure the benefit of it, and at the same time the ground will be kept cooler, while there is the further great advantage of preventing the loss of food by capillary attraction. In some degree hoeing takes the place of mulching, but it can never be quite equal to it, because no direct food is then provided. It is, however, impossible to overestimate the value of hoeing, and from now to the end of the month at least the surface soil must be hoed frequently.

HORACE J. WRIGHT.

A NEW ALPINE AURICULA.

THE new Auricula Roxburgh, as shown by Mr. James Douglas, is a very fine addition to the alpine section. A casual glance at the accompanying illustration gives one a good idea of the stout umbel and bold head of flowers that this variety is capable of carrying. Moreover, the healthy appearance of the foliage in particular bears evidence of a sound constitution. A closer inspection of the illustration reveals a certain amount of refinement in the flowers, which are of

good size, nearly two inches across, shaded purple, and merging to blue at the margin, while the creamy white centre is remarkably well defined.

HARDY PRIMULAS IN DIFFERENT LOCALITIES.

It is interesting to note how the same plants behave differently in different localities. I refer to Mr. Malby's instructive article, "A Beautiful Rock Garden Primrose," pages 193 and 194 of your issue for April 20. The tendency to raise themselves above ground-level is common to a certain extent in a great number of (perhaps mostly alpine) Primulas, and I think Mr. Malby is correct in assuming it to be Nature's method of guarding the plants from being buried by the annual deposits of grit and humus which are washed down so plentifully from the mountains every spring.

Strange to say, *P. rosea*, which Mr. Malby mentions as typical of this tendency to grow out of the ground, behaves quite differently in my garden. Twelve years ago I planted, near the margin of a small pond formed by an artificial streamlet, six plants of *P. rosea*, the seedlings of which have since then not only encircled the whole of this little basin, but have also travelled up and down this rill to such an extent that I am now obliged to carefully remove the flower-stalks before the ripening of the seeds, lest every other kind of plant-life along the water-course should be smothered. After flowering, *P. rosea* produces an enormous growth of leaves, which during winter die down right to the hearts of the plants, and on removing the withered leaves in the early spring nothing is observable of the plants having raised themselves above the soil. Last year I lifted one of the original plants, and we had to use considerable force with two four-pronged forks before being able to bring up the clump, which consisted of hundreds of rosettes.

P. farinosa has flourished along the same rill of water all these twelve years without requiring to be looked after. The old plants perish and thousands of seedlings take their places in turn, shifting for themselves. In the soaking, spongy bogs where *P. farinosa* grows hereabouts, the little plants often hang through the winter quite

suspended among the hard grass, their bare roots only reaching down to the water. Where they grow on drier soil, they rest closely on the ground with their roots in the soil. *P. marginata* is the worst here for growing high. I cut off the tops every second year, striking them afresh, which they do very readily.

The usefulness of this rising above ground may be estimated by the fact that species which retire below or half beneath the surface, like *P. cockburniana* and *P. cashmeriana*, are much more liable to suffer from wet winters, although others, again, like *P. Sieboldii* and *P. sikkimensis*, which disappear entirely below the surface, do not seem to become endangered thereby.

In connection with the tendency under notice, I have observed a most interesting fact in the mountains. On Mount Rofan (Achensee, Tyrol), 2,300 mètres above sea-level, *P. minima* grows abundantly in several distinct positions. On a steep slope near the summit may be noticed a great number of what look from a distance like so many old molehills grown over with grass. On nearing these, however, you find their tops entirely grown over with firm, close carpets of *P. minima*. These little hills are sometimes over six inches in height. In another position on the same mountain, a little lower down, I saw this *Primula* growing on level ground, covering quite extensive stretches, but without the slightest sign of any elevation above the surrounding alpine turf. Here *P. minima* forms, together with *Azalea procumbens*, a perfectly smooth surface.

The deduction to be drawn from this difference in the manner of growth must obviously be this: that in the first case the soil on the steep slope is being washed away around the patches of closely-matted rootwork of the *Primula*, be it ever so little every year, while on the level ground this agency is not at work. How old the plants on these little hillocks may be, who can tell? They must, however, be of great age, considering that these mounds are not surrounded by loose *débris*, but by a firm carpet of short grass, growing in that black, greasy, alpine humus we see everywhere in the mountains, and which the dense grass covering effectually protects from being washed away to any great extent every year. If the rising out of the ground would be the cause of these hillocks being formed, why should not the same process also take place on the level turf?

E. HEINRICH.

Planegg, near Munich, Bavaria.

WHITE FRITILLARIES.

It can hardly be claimed that the *Fritillarias* are popular garden flowers, although they include among them many species and varieties of considerable beauty. Some of the finest are difficult to retain in our gardens, while others, again, have an appearance more curious than attractive. Yet those who have studied these plants are eager to assert that they have much real beauty, and that they would not like to be without some, at least, of these bulbous plants. Our native *Fritillaria Meleagris*, the Guinea-hen Flower or Snake's-head Lily, as generally seen, is more singular than attractive, although it has many points of beauty in its curious chequering and its different hues. This singular appearance is not, however, to be asserted of the white varieties, which are really beautiful with their shapely, pendent, bell-shaped flowers of pure or creamy white. A small group of one of these white *Fritillaries* grown in my rock garden is represented

in the illustration, and is one which everyone admires who sees it here. It is, I think, the prettiest of the four different types of *F. Meleagris* with white flowers which I cultivate here. The habit is finer than in the others, the plants being taller and more graceful, while the flowers are of a delicate waxy white texture and colour. This form came to me from a Scottish garden, where it had been for many years.

Another handsome variety with white flowers has these purer than that illustrated, but the bells, though larger, are broader and on shorter stems. Still, it is very ornamental; it comes a little later than the preceding. Its flowers are very shapely. There is also in my garden another *Fritillaria* with very white flowers, but of still dwarfer habit, and having the segments more pointed and not so handsome-looking as in either

should not be kept any longer out of the ground than can be helped. From 3 inches to 6 inches is a good depth for *F. Meleagris* and its varieties.

Dumfries.

S. ARNOTT.

COLOURED PLATE.

PLATE 1451.

CHINESE PRIMULAS.

EACH year is marked by some improvement among these ever-popular greenhouse flowers. It may be a new shade in colour, an increase in size of petal, or even a more floriferous habit. Some day—and it may not be far off—the high-water mark of perfection will be attained and further improvement will seem impossible. But



WHITE SNAKE'S-HEAD LILIES OR FRITILLARIES IN A SCOTTISH GARDEN.

of the foregoing. A further variety is *F. Meleagris contorta alba*, a quaint-looking flower of different habit. In this the flowers are sometimes twisted—hence the name *contorta*—but this is not always visible. The flowers are on dwarfer stems than in the first two and are long-petalled. They are of very thick texture and of a clear good white.

Although *F. Meleagris* likes a moist place, these white forms (and the others, for that matter) will thrive and flower well in drier soil. The group here figured is at the base of a rockery, and is only about six inches above the ground level. I have other *Fritillarias* of the same species higher up, and I find they look most ornamental at, or nearly at, the level of the eye. Bulbs should be procured as early as possible in autumn, and

at present *Primulas* are grown in thousands by Messrs. Sutton and Sons at Reading, and, in such skilful hands, who can tell what improvements may yet be wrought? House after house was bright with these charming flowers when we made our visit in the dull days of February. The varieties are grown in distinct batches, each colour kept rigidly to itself. If one plant should show a variation, however slight, from its neighbours, it is kept under close observation, and should it turn out to be an improvement on those already grown, it would be saved for seed for future trials. So carefully are the various stocks selected and guarded that each may be relied upon to come true from seed.

The Famous Duchess Strain. The turning-point in the development of the large-flowered

Primula sinensis seemed to have been reached when, about ten years ago, Messrs. Sutton created quite a sensation with their remarkable introduction *The Duchess*, which still holds its own as one of the most distinct and beautiful *Primulas* yet raised. The flowers, borne in a large truss just above the foliage, are pure white, with a unique zone of bright rosy carmine surrounding a clear yellow eye.

From a series of crosses made with *The Duchess Primula*, Messrs. Sutton and Sons have evolved a hybrid strain, the flowers of which vary from blush white to crimson, all having the characteristic zone of deeper colour around the centre.

Giant Primulas.—This is the title given to a modern development remarkable not only, as the name implies, for the size of flower, but also for the substance of petal. So large are the individual flowers that a five-shilling piece is quite lost when placed against one. White, pink and crimson, with intervening shades, are the colours represented in this section.

Double Varieties.—It is interesting to observe that with practically all the standard varieties, such as *The Duchess*, *Pink Beauty*, *Salmon Pink*, *Crimson King* and *Reading Blue*, Messrs. Sutton and Sons have secured the double forms, and that is not all, for, without exception, each double variety will come true to name from seed. There are times when the flowers of the double forms are partially hidden by their foliage, and this little failing may be obviated by placing the plants on the greenhouse shelves, when the flowers will be raised above the leaves, and will thus be brought out to their full beauty.

Star Primula (*P. stellata*).—This elegant strain, introduced by Messrs. Sutton and Sons in 1895, has attained a high position in popular favour. The plants are very floriferous, and for conservatory and general decorative work they are indispensable. It should, perhaps, be pointed out that the flowers differ from those previously referred to, in that they are much smaller and plain edged. Moreover, they are borne tier upon tier in three or four whorls, whereas *P. sinensis* generally carries the flowers in one huge truss. Every shade of colour found in the larger type is represented in *P. stellata*. The accompanying coloured plate represents part of a house of these star-flowered *Primulas* at Messrs. Sutton's trial grounds at Reading, and has been prepared from a coloured photograph taken by their photographer.

Among other *Primulas* grown at Reading, that dainty species, *P. malacoides*, finds a congenial home. Of light habit and flowering as it does in winter and spring, it is a suitable companion to the yellow-flowering *P. kewensis*. The latter has fragrant blooms, reminding one of the scent of Cowslips, and since it is yellow, it supplies just the colour that is wanting in the flowers of *P. sinensis*. So far no crosses of this hybrid *Primula* have been raised; but in the hands of the skilful

hybridists at Reading, who can tell what future is in store for the ever-popular greenhouse *Primulas*?

NOTES ON TULIPS.

THE last day of April saw as bright and as beautiful a show of flowers as the Royal Horticultural Hall at Westminster has ever held. To this the magnificent displays of Cottage and Darwin Tulips from Sir Randolph Baker and Messrs. Sutton, Barr, Wallace, Bath, and Cartwright and Goodwin contributed in no small degree. Tulips are wonderfully bright things, and more than hold their own for gorgeous colouring against any flower that may be pitted against them. It must have been their brilliant hues that instantly took

of Darwins and many Cottage varieties have advanced this season, and, on the other hand, I know that enterprising dealers at home are quietly picking up and planting all the best varieties. Now, as these for the most part increase very quickly, I do not see how there can be any substantial rise; if anything, it will be the reverse. Retail prices will fall. I have laboured this point to indicate that if a certain sum is put aside for the purchase of these Tulips this year, the same amount will probably buy more and not less in 1913, and so on.

Visitors to the show were able to select for themselves, but it may be useful to others to mention some that might well be given a trial. Such varieties as Mr. Farncombe Sanders, Clara Butt, Pride of Haarlem, Rev. H. Ewbank, Baronne de la Tonnaye and White Queen among the Darwins, and Mrs. Moon, *gesneriana spatulata*, Bouton d'Or, Fairy Queen, *retroflexa*, I. a Merveille and Picotee among the Cottage, are too well known to need description or commendation.

Nearer planting-time selections may be valuable. I think I can now best occupy my remaining space by giving a few of the less-known or newer ones which might be tried. Two varieties received awards of merit, and one was passed on to the scientific committee with a recommendation for a botanical certificate. (1) Grenadier, which was shown by Mr. W. T. Ware, but before the afternoon was over it had changed hands, and Messrs. Wallace and Co. of Colchester are at the present time the proud possessors of this brilliant flower. As I hope there will be a picture of it in next week's GARDEN, I will reserve my description until then. (2) Velvet King is a fine tall, purple maroon. It is one of the best of all the tall, large, dark ones. (3) Sensation, the variety referred to the scientific committee, is, in the catalogue words, "a great novelty." It is the first purple-marked or bybloemen "Parrot" ever put into commerce. It appeared some years since in Holland as a sport from a Darwin variety called Queen of Spain. An extremely taking flower is Moonlight. It is a pretty pale shade of



THE NEW WHITE SAXIFRAGE MRS. J. F. TOTTENHAM.

(See page 235.)

the gardening world of Central and Western Europe by storm when, in the middle of the sixteenth century, they were first brought from Constantinople and the East. I often try to picture the general run of the denizens of cultivated gardens about 1550, and then to imagine what I would have said and felt had I suddenly walked into one full of Tulips. To-day we have tens of thousands of species and varieties which were unknown then, but, I ask, which of them for pure unadulterated Oriental magnificence can eclipse the Tulip?

Colour is an essential part of a modern English garden. The importance of the Tulip lies in its being able to give this desirable adjunct at a comparatively low price and at a time when something was wanted. I am told that the wholesale prices

canary yellow, with a real canary colour inside. It has a long-shaped bloom and is decidedly on the early side. It should make a handsome border planted alternately with Scarlet Emperor. A dark Darwin new to me was Bacchus, a large, egg-shaped plum purple self. This was exhibited by both Messrs. Barr and Sutton. Marie, a lovely silvery purple, was shown by Messrs. Wallace, and Julie Vinot, a good rose and pink, by Messrs. Cartwright and Goodwin. Both these are varieties to note. Among the Cottage section, Clio or Bronze Queen was in several collections. It is biscuit brown in colour and a fine strong grower. Oriana, a sort of shaded ruby red; Amber Crown, amber and apricot; and Cassandra, cherry rose, were among the others that caught my eye. It was a great day for Tulips. JOSEPH JACOB.

GARDENING FOR BEGINNERS.

TRANSPLANTING SEEDLINGS RAISED IN A COLD FRAME.

ON this page in the issue dated March 23 advice on the sowing of seeds of half-hardy annual flowers was given, and the promise made that the transplantation of the seedlings would be dealt with in due course.

As these have now reached the stage when this work is necessary, a few hints on the best way to do it will be of service to the beginner. In the issue mentioned above, the drainage of the seed-boxes was dealt with fully, a sectional illustration of a box properly drained being shown. Thorough drainage is equally as necessary for the seedlings when they are transplanted, and for this reason the boxes or pans used for the purpose ought to be 3 inches or 4 inches deep, and each should have a number of good-sized holes in the bottom. Over these broken pots, or "crocks" as the gardener terms them, should be placed, concave side downwards, next a layer of rough soil and, finally, the sifted material, which must be made firm. All boxes or pans must be quite clean.

The Best Soil.—Although amateurs often have but little choice in the selection of soil for their



1.—ASTER SEEDLINGS BEFORE BEING TRANSPLANTED. ON THE LEFT THEY WERE SOWN TOO THICKLY.

better and do not suffer so much as when the soil is on the dry side. In the March 23 issue the necessity for thin sowing was emphasised, and for the purpose of bringing this home forcibly, one

are on the one hand, and how sturdy on the other. In Fig. 2 some of the sturdy seedlings from the thinly-sown half of the box are shown separately. To lift the seedlings in readiness for transplanting, there is nothing better than an ordinary wooden label, as shown in Fig. 2. If this is thrust well under a cluster of seedlings, they can be lifted out bodily, as depicted in the centre of Fig. 2. This avoids injuring the roots, and the individual seedlings as shown can be taken out with practically all their fibrous roots intact—a not inconsiderable item in the successful cultivation of Asters, Stocks, Zinnias and similar flowers.

Distance to Transplant.—This may vary somewhat, according to the space at the disposal of the cultivator. If I had unlimited room, I would place the seedlings 3 inches apart each way; but at this season cultivators, and especially beginners, have none too much room under glass, and consequently 2 inches must suffice. The actual replanting should be done with the blunt-pointed dibber shown in Fig. 2. This is thrust into the soil and withdrawn, the roots of the seedling dropped into the hole, and the dibber again pressed in beside it, but so that some soil is between the roots and the dibber. This soil is gently squeezed to the roots, so that the latter are made quite firm. Fig. 3 shows a box of seedlings ready for the frame.

Subsequent Treatment of the Seedlings.—As soon as a box is planted it should be labelled, given a light overhead watering with a rosed can and stood in a cold frame. This should be kept almost closed for three or four days and the seedlings shaded from bright sunshine. By that time they will have made new roots, and from then onwards more air can be given, so that by the second week in June a batch of sturdy, well-grown if rather late plants will be available for planting outside. They will give better results than similar kinds raised in heat.

P. H.



2.—SEEDLINGS LIFTED WITH A LABEL. NOTE THE CLUSTER OF ROOTS THAT EACH HAS. THE POINTED STICK ON THE LEFT IS USED FOR TRANSPLANTING.

seedlings, every endeavour should be made to get it as good and sweet as possible. A mixture that will suit most kinds of half-hardy annuals is composed of decayed turfy loam two parts, leaf-soil or Cocoanut fibre refuse half a part, well-decayed, rather dry manure half a part, and coarse sand half a part. Failing the decayed manure, use a rather smaller proportion of Hop Manure. All the ingredients should be well mixed and passed through a sieve with a 1-inch mesh, retaining the coarse portion for placing over the crocks as advised above. Avoid filling the boxes or pans too full; when made firm the soil ought not to come within half an inch of the edge of the box.

Lifting the Seedlings.—Having prepared the receptacles, our next duty is to give attention to the seedlings. The soil in which these are growing should be well watered an hour or two previous to the transplanting or pricking off, as they lift

half of the box shown in Fig. 1, *i.e.*, the left-hand side, was sown thickly, and the other half thinly. It will be readily seen how crowded the seedlings



3.—SEEDLINGS TRANSPLANTED SEPARATELY. GROW IN A COOL TEMPERATURE FOR PLANTING OUT EARLY IN JUNE.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.
The Flower Garden.

Aubrietias.—As the flowers pass their best the plants may be trimmed over and made tidy. The young growths that ensue will be found to strike freely at this season if inserted in a frame and kept close, and will make nice plants for placing out at the end of the year.

Alpine Phloxes.—These, too, may be propagated from cuttings as advised for the above.

Myosotis.—Select a shady position for sowing the varieties for next season's spring bedding. Draw shallow drills about six inches apart and sow thinly. A practice some people adopt, and one that answers well, is to leave a plant or two in the ground to seed naturally, when the seedlings will appear round the plant. When large enough, transfer to a piece of ground that has been well prepared and plant 4 inches apart.

Bamboos.—These transplant well at this season of the year if a little care is taken with them in dividing and replanting. A position that is sheltered from the cold easterly and north-easterly winds should be selected, such as a dell, for instance; at any rate, for the more tender species. The ground should be treated liberally and deeply worked, adding plenty of leaf-mould and manure. For woodland walks these Bamboos are extremely effective; and so are some of the more graceful varieties, such as *Arundinaria gracilis* and *A. nitida*, for planting as specimens on the lawn or beside water, when it is advisable to give temporary protection in sharp weather.

Shrubs.—A few of the very best now in flower to note for planting later are *Exochorda grandiflora* (the Pearl Bush), *Cytisus kewensis* (creamy white), *C. purgans* (golden yellow), *Prunus Pseudocerasus* and variety *J. H. Veitch* (the latter a beautiful tree), *Pyrus Malus floribunda* and variety *atrosanguinea* (wreathed with blossoms), *Berberis Darwinii* and *B. stenophylla*.

Orchids.

Dendrobiums.—Now that the majority of these are making their growths, they will need the warmest and lightest end of the house and plenty of humidity to keep them moving. They do well suspended to the roof, so that the maximum amount of light reaches them. When watering, lift the plant down and immerse the receptacle in a pail of chilled water.

Cattleyas.—Many of the spring-flowering ones are making a rich display. To preserve the flowers as long as possible, remove the plants to the coolest end of the house and keep a little drier.

Watering.—Those plants that were potted up, such as *Calanthes* and *Cypripediums*, will, as the roots enter the new compost, require a little more water. Keep the stages, however, well damped, syringe in between the pots, and damp down the floor of the house in the evening.

Plants Under Glass.

Caladiums.—The large-leaved varieties, to show off their leaf-colouring to the best advantage, will need a thin, neat stick placed to each leaf and staked out. Shade from bright sun and continue to grow on in a warm house. As the pots fill with roots, assist with liquid manure-water and keep the surroundings thoroughly damp.

Schizanthus.—Make another sowing now for an autumn display, which, if potted on into 8-inch pots, will yield abundance of flower. The seed can be raised quite coolly, and the plants in another month stood out in the open. Never allow them to suffer from the want of water once they have become well rooted.

Coleus thyrsoides.—Insert cuttings of this plant now, which will flower early next year. The cuttings will quickly root in fibre in a warm pit, and when rooted can be potted up singly and grown in a warm house. Stop the plants twice to induce a bushy habit. When in flower, these will last a long time in a cool house, and produce a pretty effect interspersed with Maidenhair Ferns.

Salvias.—These must be shifted on as becomes necessary, and if attention to potting has to be delayed, help the plants by the addition of liquid manure-water. These, to form good bushy plants

for winter flowering, must be stopped twice more. Syringe the plants and admit plenty of air. In another month these may be stood out of doors.

Hardy Fruit Garden.

Watering.—The drying conditions of the weather throughout April have been very detrimental to trees that are newly planted in particular, and where possible these should have a good soaking of water at the roots, and immediately after a mulch applied. Syringe the growths frequently.

Raspberries.—Remove any suckers that appear between the rows by means of a fork, and remove weed-growth with the hoe. Give a mulching of rotten manure.

The Kitchen Garden.

Dandelion.—This makes a splendid addition, when forced, to the winter salad list. Sow seed now in shallow drills, selecting a piece of ground well drained and not too rich. When the seed germinates and the plants are large enough, thin out to a foot apart.

Endive.—Where this is required in the autumn, make a small sowing in drills about eighteen inches apart for the Large-leaved Batavian varieties, but for the Green Curled less space will be needed.

Turnips.—Make small successional sowings and cover with short grass-mowings, which are a good preventive of the fly. Hoe between the plants sown earlier frequently. In the event of a shower of rain, dust over with soot.

Radishes.—Make frequent small sowings now onwards wherever the space permits. Water the seedlings as often as possible to hasten the supply of succulent roots.

The Rose Garden.

Aphis.—Unless the growths are kept syringed occasionally, these, in the absence of natural dampings, will become badly infested with fly. Use a reliable insecticide according to the directions and a syringe producing a fine spray. On mild evenings or early mornings thoroughly wet the foliage. Give newly-planted Roses a good soaking of water, as dryness at the roots is one of the primary causes of insect attacks.

Rose Maggot.—Keep a sharp look-out for curled leaves, and press them between the thumb and finger.

Gaps.—Any that may be occasioned should be filled up with plants out of pots, carefully removing them. E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Thinning Muscats.—It is a common experience for the berries of Muscat Grapes, though they seem to set, to fail to swell. Attention to this must be given when thinning not to thin severely at first.

Black Hamburgs.—It is better to let these grow without tying down until the shoots become hard enough to manipulate without snapping off at the junction with the old wood. Meanwhile the points may be stopped when they reach the length desired, and all the sub-laterals rubbed off as soon as they are large enough to handle. Many growers do not now allow any sub-lateral growth, but depend solely on the primary foliage to perform the functions of the leafage.

Melons.—Those in manure-heated frames will now grow freely, but it is still desirable to apply fresh material when the heat is on the wane. Only a few—not more than four—main shoots should be left on each plant, and the lateral growth persistently restricted before it makes much progress. It is the usual experience that red spider, which is the bane of Melons grown in frames, attacks the tender young leaves of laterals before attacking the early foliage. Moderate ventilation is better than much moisture in hot weather.

The Vegetable Garden.

Leeks.—Should the seedlings not make satisfactory growth a slight surface-dressing of a stimulating manure will cause them to make faster progress.

Early Peas.—Dwarf varieties in flower will pod much quicker if the tips of the haulm are pinched off. Only a portion should be treated thus, the unpinched plants coming in slightly later. In dry weather in light soil a few profuse waterings will be of much benefit.

Brussels Sprouts.—The earliest plants ought to be ready to transplant, rather small, if sturdy, plants being preferable to very large ones. I get the finest and hardest Sprouts from hard ground unmanured. The plants require ample space, 3 feet between the rows and at least 2 feet between the plants. Later batches growing in seed-beds should be examined, and the seedlings thinned if growing too close together.

Autumn Cauliflower.—This also will be forward enough to transplant. It requires much manure and ground that has been very thoroughly worked and pulverised. Three feet by 3 feet is none too much space to allow each plant. If possible, with a trowel transplant each plant with a ball of soil and thoroughly water in, finishing by deeply hoeing the interspaces.

The Flower Garden.

Hollyhocks.—Finish planting the latest of these. Old plants throwing numerous spikes may require to have these reduced in number, but a many-spiked Hollyhock is no mean object when in full flower.

Herbaceous Plants.—Not a few of these will have grown so tall as to need supporting, lest the stems be bent and twisted. A simple and efficient method is to tie a strand of strong string loosely round each. Recently-planted material will, however, need a stake, which, as a rule, need not be a long one. The foliage of such early flowers as Winter Aconite may now be cleared off, also the decaying flower-stalks of Narcissi.

Pæonies.—It is imperative that strong clumps of these be also staked without delay, for once the stems sway off the upright, it is impossible to get them straight again. I use three to six strong Bamboo sticks to each, inserting them at an angle from the plant and attaching a strand of strong string to each near its tip. If space is left for the shoots to press outwards as they extend in height and before the flowers open, the supporting material is hidden from view.

Anemone Hepatica.—When Hepaticas get aged, the clumps become mere rings, the centres dying away. The present is a suitable time to lift all such, pulling the plants to pieces, and if wanted in masses, planting them at once 6 inches apart. They are rather difficult to divide, but, by steeping the plants in water and washing the roots free from soil, division is greatly facilitated.

Auriculas.—Though valueless from the florist's point of view, a selection of these in yellow, bronze, brown, crimson and other pure tints provide a delightful feature in the garden. They are now passing out of flower, and the flower-stems should be removed before seeds begin to form. Clumps that have become too large cannot be reduced by division at a better time. They require to be deeply planted quite up to the base of the leaves. Special varieties of Primroses, such as the single green and doubles, should be treated in the same way. Some of these are difficult subjects in light, dry soils, and probably there is no better way of treating them than by biennial division and replanting in fresh soil.

The Plant-Houses.

Dracænas.—After the rooted tops are removed and placed in pots, the stems, and also pieces of the thickened roots, may be cut into short lengths and buried in sand in the propagating-frame, where they will in due time form roots and push shoots, each forming useful plants in the course of the next year. Dracænas must be kept damp and not too hot, otherwise thrips will prove a persistent nuisance.

Phyllocactus.—The time when this flowers is at hand, and it may be well to note that dryness is essential for the flowers, which speedily rot if the plants are kept in an atmosphere saturated with moisture. Phyllocactus is easily propagated. All that is necessary is to select a clean and healthy piece, planting it firmly in a 4-inch or 5-inch pot in a simple compost. Apply no water till roots are formed. The after-cultivation consists in repotting as required and giving the plants a light position in a warm greenhouse. R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

SPRING CABBAGE.

WE have been cutting Early April since the end of March, and nice little developed heads, too. One or two varieties have bolted rather badly, but we are using the greens and then pulling up the plants and replacing with some fresh stock which has been pushed along in frames, and which will make a fine succession. In order to always have some nice young Cabbage it is a good plan to sow some of the summer varieties about every month from March to June or July. Sutton's Flower of Spring is a good variety to follow Early April, and is a Cabbage of much merit. Carter's Early Heartwell is another Cabbage of exceedingly fine quality, and one of the very best in cultivation. Carter's Beefheart is also a splendid Cabbage, probably one of the finest grown. It is, moreover, very hardy as well as robust, and when a large Cabbage is wanted, this is the one to grow. These are, of course, August-sown Cabbages. Good varieties to sow now are Sutton's Favourite, Earliest, Tender and True, and Sutton's All Heart. Sown now and onwards, these make very dainty dishes through the summer months, and are always welcome. These can be put in as catch-crops to fill up the ground where early crops have been gathered, and such crops do not take much out of the soil, as the longest time they are on it is not many months. I like to see the ground occupied rather than lying dormant. We have to crop nearly all our ground twice and thrice in a year, as far as is at all practicable.

The Gardens, Leonardslee.

W. A. Cook.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Odontoglossum Uro-Skinneri Burford Variety.

—A handsome variety, remarkable for its depth of colour and exceedingly broad lip. The plant shown was of robust habit and carried a strong spike of large flowers. Shown by Sir Trevor Lawrence, Bart.

Cattleya Schroderæ Glebelands. — A fine variety of a well-known Cattleya. Its most noteworthy feature lies in the exceptionally large chrome yellow zone in the lip of the flower. The petals are very pale mauve, almost white. Shown by J. Gurney Fowler, Esq.

AWARDS OF MERIT.

Cheiranthus mutabilis Keeley's Variety.

A plant of decided merit and freedom of flowering. As shown the examples were much dwarfer and bushier than the type, and with deeper-toned flowers, reddish in the main, though variable, as the name suggests. From Mr. W. Rickards, Ask Priory.

Echium truncatum.—A fine companion to such giants of the race as *E. Wildpretii*. The columnar spicate inflorescences are very large, the flowers of an intense gentian blue, and rendered the more attractive by the long protruding stamens, which are of a reddish colour. The species requires the protection of a warm greenhouse. It is very handsome and well deserves extensive cultivation.

Celsia cretica Cliveden Variety.—A very showy variety of this useful plant. The flowers are of clear yellow colour, figured with crimson at the base of the upper petals, and are disposed

in dense spicate racemes. These came from W. Astor, Esq., M.P., Cliveden, Taplow (gardener, Mr. W. Camm).

Cineraria Pompadour (Strain).—We presume we are entitled to regard this as a fancy strain, inasmuch as in all the variations of it there is a marked tendency to colour variation in the florets. The dominating colours are blue, white and rose, and these occur in longitudinal stripes on the florets with a good deal of regularity. As shown the plants were very dwarf and exceedingly pretty. From Messrs. James Veitch and Sons, Limited, Chelsea.

Lewisia Howellii.—A superbly-flowered example of this recently-introduced novelty was shown. The succulent leaves are nearly spatulate, with raised, crested, sinuate margins, the stalked inflorescences appearing from the bases of the lower leaves. The plant carried about eleven finely-developed inflorescences and a profusion of flowers capable of enduring for weeks. The expanded flowers are of the size of a shilling, buff to apricot in tone and striped with red. By far the most remarkable alpine novelty shown at this meeting. Exhibited by Mr. M. Prichard, Christchurch, Hants.

Deutzia longifolia.—A delightful novelty and a good garden plant all in one; a plant, too, that must presently be demanded in its thousands. The great charm of the species is the pink colouring of the flowers, these appearing in axillary clusters on every twig and branch, large or small. Bushy and free in growth and flowering, and neat-habited and hardy withal, the new-comer would appear to possess every attribute capable of rendering it immensely popular. It is one of Mr. Wilson's introductions from China, and we regard it as an acquisition. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Saxifraga Mrs. J. F. Tottenham.—A most charming hybrid kind—presumably *S. granulata* and a Mossy variety. The buds are at first pink coloured, and on expansion reveal a pure white surface. Quite a good novelty belonging to a new and highly attractive race of Saxifragas. (See illustration on page 232).

Saxifraga Comet.—Also a *granulata* hybrid, the evidence being well marked in the leafage. Indeed, if the root characteristics of *S. granulata* remain, it might prove but a glorified form of that well-known kind. The flowers are very large, rather starry and pure white. Both were exhibited by Mrs. Lloyd-Edwards, Llangollen.

Araucaria excelsa elegantissima aurea.—In the small examples as shown this is a very pretty variety, the tips of all the branchlets being of a pale yellow colour, which is in marked contrast to the body colour of the branches. As an excellent companion to Silver Star, which has whitened or silvery tips, we commend this fine novelty to all. From Messrs. Thomas Rochford and Sons, Broxbourne.

Tulip Velvet King.—A very handsome Darwin kind of deep bronzy red colour. From Messrs. Barr and Sons, Covent Garden.

Tulip Grenadier.—A May-flowering sort of the largest size. The dominant colour shade is orange scarlet; internally the flowers have a clear golden base. Exhibited by Messrs. Walter Ware, Limited, Bath. The stock of this fine Tulip has passed into the hands of Messrs. Wallace and Co., Colchester.

The foregoing were shown before the Royal Horticultural Society at Vincent Square, Westminster, on April 30, when the awards were made.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

PRIMROSES DYING (Rhagatt).—With the meagre evidence afforded, it would be but the merest guesswork for us to say what insect was the cause of the mischief. We advise you, however, to search for slugs at dusk, and dust the plants with soot. Not infrequently birds in their search for nesting material play havoc with these plants. Usually, however, it is the winter work of the slug.

TALL HERBACEOUS PERENNIALS (E. E.).—You would find the Michaelmas Daisies among the more useful, and from two or three sections you might select all that you would require. In case you wish for greater variety, we give you names: *Aster Climax*, *A. Novi-Belgi* Wm. Marshall, *A. N.-B.* Robert Parker, *A. N.-B.* Beauty of Colwall, *A. N.-B.* Arcturus, *A. Nova-Angliæ* Mrs. S. T. Wright, *A. cordifolius* Edwin Beckett, *A. c. Ideal*, and *A. c. elegans*. These embrace three sections of the Michaelmas Daisies. Other good things are *Helianthus* Mrs. Moon, *H. multiflorus giganteus*, *H. m. major*, *H. m. fl.-pl.* *Helenium autumnale grandicephalum*, *H. orgyalis*, *Pyrethrum serotinum*, *Bocconia cordata*, *Hollyhocks*, *Heliopsis scabra*, *Solidago Shortii* and *S. multiradiata*. If space permits of leaf development, *Anemone japonica* in red, pink and white might well be included.

DAFFODILS (E. W.).—The Lenten Daffodils (*Narcissus pseudo-Narcissus*) you kindly forward for our inspection are just a good ordinary sample of this wildling when growing in congenial soils and amid congenial surroundings. The plant simply luxuriates in moist meadow lands, and as these more nearly approximate to mellow clay, the finer do the flowers become. Where the soils are inclined to be of a reddish clay, there do we usually find a little more external coloration, just as those inhabiting drier and lighter soils are seen to be of a much paler tint. It is all a question of environment, and flowers of the character and good quality you submit are common to Warwick, Worcester, Devon and Sussex. It may be that the residue from the works near by, acting as a tonic, is responsible for a little of the colouring, though the soil and marshy nature may be responsible for much more.

TREES AND SHRUBS.

TREATMENT OF A YEW HEDGE (Bede).—It would help your Yew hedge to thicken at the bottom if you were to cut 6 inches or 9 inches off the top. It will, however, take a very long time to get the lower part well furnished with branches. Should there be sufficient space between the plants, it would be a good plan to interplant with nice young, bushy plants. These in time would spread out and furnish the bottom. If you gave the ground along each side of the hedge a top-dressing of well-decayed manure, it might assist the roots somewhat and cause stronger shoots to be made.

SHRUB FOR NAME AND TREATMENT (F. S.).—The specimen of a variegated-leaved shrub sent for identification is *Euonymus radicans foliis roseo-argenteis*. It ought not to be difficult to propagate. Try taking cuttings of short shoots in June or July, and insert them firmly in pots of sandy soil in a close frame. Water carefully until rooted. Roots ought to be formed in about three weeks' time after the insertion of the cuttings. The Cornish Elm is planted less frequently than it ought to be as a street tree. The leaf you send for name is the Fern-leaved Beech (*Fagus sylvatica* variety *heterophylla*). Fine examples of it are to be found in various parts of the country.

CONE FOR IDENTIFICATION (A. M. D.).—The cone sent for name belongs to the Cluster Pine (*Pinus Pinaster*), a native of the Mediterranean region. If your Pines are growing close together, you cannot expect shrubs to do well beneath their shade; but if there are moderately large open spaces, you could make an effective undergrowth by using evergreen and deciduous *Rhododendrons*, with patches of *Heather* and hardy *Ferns* here and there. The Laurels might be cut down almost to the ground at the present time. All the stumps may not grow again, but the majority ought to form nice bushy plants from new branches produced from dormant buds. You cannot expect much in the way of shrub growth beneath the shade of a large Beech tree. We advise you to plant the ground beneath the tree with Bluebells and Ferns.

THE GREENHOUSE.

ORCHIDS IN A VINERY (N. G.).—There are several Orchids that will thrive in a vinery, provided those selected make their growth during the summer months and are at rest the same time as the Vines. We suggest that you commence with a few plants, such as *Dendrobium nobile* and its varieties *alba* and *nobilis*, *D. Ainsworthii*, *D. Wiganii*—in fact, any member of this useful genus; *Lælia anceps* and its various forms known as *chamberlainiana*, *Stella*, *alba*, *Dawsonii* and *sanderiana*. If your house is a lean-to, *Epidendrum radicans*, *xanthinum*, *o'brienianum*, *Boundii* and *kewense* could be planted against the wall, while such subjects as *Calanthe Veitchii*, *Harrisii* and *William Murray*, also any of the *Catasetums*, would thrive on a shelf about two feet from the roof glass or on the staging beneath the Vines. The chief points in cultivation are to repot when new roots appear at the base of the current growth, using pots just large enough to comfortably take the roots, and allowing sufficient space for one or two seasons' growth. The soil should be clean, live sphagnum moss, good peat and *Osmunda fibre* in equal parts; but for the *Calanthes* and *Catasetums* fibrous loam should be employed instead of the *Osmunda fibre*. Fill the pots one-third of their depth with drainage, and press the soil moderately firm about the base, while the watering must be carefully done at all times. All the plants ought to be kept near the glass. This can be done by means of inverted flower-pots. Orchids have few pests, the worst being thrip, which can be easily kept in check by vaporising the house occasionally; but a sharp look-out must be kept for red spider if it is present on the Vines. We take it your vinery is heated, otherwise it would be useless to attempt Orchid-growing.

FRUIT GARDEN.

CHERRY BLOSSOM REFUSING TO OPEN (G. L. C.).—The branch of Cherry tree with flower-buds on is suffering from a disease termed canker. It is the disease to which, unfortunately, the Cherry tree, like the Apricot, is subject. That part of the tree from where this branch is taken will probably die in the course of the summer or autumn. There is no cure for the disease; but trees slightly affected live to be old and bear good crops of fruit annually.

VINES DOING BADLY (W. M.).—The best thing to do is to lift the Vines as soon as the leaves have dropped in the autumn, overhauling the roots, cutting away the dead ones and shortening the points of all. Clear away all the old soil and see that the drainage is sufficient. Replant in the following compost: To one good barrow-load of turfy, fibrous loam add a gallon of brick ends, broken small (size of a pigeon's egg), the same of old mortar rubble, broken in the same way, three pints of quarter-inch bones and a pint of bone-meal, also a sprinkling of soot. Mix all well together, and have everything ready for replanting before the Vines are disturbed, so that the roots are not exposed longer than can be helped. It is better to lift the Vines entirely than to add more soil to the existing border as you suggest doing.

MISCELLANEOUS.

JAPANESE PIGMY TREES (M. A. G. D.).—Japanese dwarf trees may be treated in the same manner as hard-wooded, cold greenhouse plants. At all times of the year the soil should be kept moist, but never let it become thoroughly saturated, such as happens when a plant stands continually in water. Repotting is unnecessary, for, should you begin to be too generous to the plants, they will probably outgrow their dwarfed character.

NAME OF FRUIT.—*F. T., Lytham.*—The fruit was too far gone for us to be sure, but we believe it to be Cox's Orange Pippin.

NAMES OF PLANTS.—*G. H.*—Rose Catherine Mermet. —*A. M.*—1, *Daphne pontica*; 2, *Lotus Bertholletii*. —*H. W. C.*—Flowers insufficient for identification. —*L. H.*—*Lotus Bertholletii*. —*W. J. B.*—1, *Adiantum gracillimum*; 2, *Abutilon megapotamicum* var. *variegatum*; 3, *Phlomis fruticosa*; 4, *Convallaria majalis* var. *rosea*. —*Mrs. H. B.*—1, *Narcissus Jonquilla*; 2, *Saxifraga granulata* flore pleno; 3, *Tiarella cordifolia*; 4, *Asperula odorata*; 5, *Waldsteinia fragarioides*; 6, *Saxifraga muscoides* Rhei; 7, *S. m. atropurpurea*; 8, *Iberis sempervirens*.

LEGAL POINT.

Outgoing Tenant: Fruit Trees (Drogheda).—The tenant of an ordinary residential property cannot sell or remove fruit trees, hedges, flowers, nor Box borders, although planted by himself, nor is he entitled to any compensation for them. Sometimes an incoming tenant takes over fixtures from an outgoing tenant at a valuation, and occasionally this is extended to the fruit trees and Rose bushes. If this is done, the incoming tenant should take care that the landlord is made a party to such an arrangement, otherwise they will vest in him at the close of the first tenancy. Any right of removal or compensation that exists is conferred on certain classes of tenants by statute, as on market-gardeners under the Agricultural

Holdings Act, when it has been agreed in writing that the holding should be treated as a market-garden, or on cottagers or allotment-holders. By the Allotments and Cottage Gardens Compensation for Crops Act, 1887, the tenant can obtain compensation from the landlord for crops, including fruit growing upon the holding, fruit trees and bushes planted by the tenant with the previous consent in writing of the landlord, and for labour expended and manure applied in anticipation of a crop. The land held is not to exceed two acres. There cannot be much doubt about what amounts to an allotment; but as the statute gives no definition of a "cottage," trouble may arise as to whether the tenant holds a "cottage garden."—BARRISTER.

SOCIETIES.

AURICULA SHOW AT SPARKHILL.

THE first of a series of exhibitions organised by the Spark-hill Horticultural Society was held on April 27 at the St. John's Council Schools, Stratford Road. The exhibits consisted of Narcissi and Auriculas, and the various classes were well represented. The Auriculas were of excellent quality, displaying great care in cultivation, but owing to the date fixed for the show being rather late in the season, the display of Narcissi was not quite up to the usual standard.

The following were the prize-winners: Eight bunches of Narcissi, at least six distinct: First, Mr. E. J. Keeling. Most tasteful arrangement of Narcissi: First, Mr. E. J. Keeling; second, Mr. F. Anderson. Six bunches of Narcissi, at least four distinct: First, Mr. E. J. Keeling. Three bunches of Narcissi, distinct: First, Mr. E. J. Keeling; second, Mr. F. Anderson. Three named show Auriculas, distinct: First, Mr. H. J. Spencer; second, Mr. H. W. Miller; third, Mr. E. Saunders. Three named alpine Auriculas, distinct: First, Mr. H. W. Miller; second, Mr. H. J. Spencer; third, Mr. J. Freeman. Three seedling alpine Auriculas: First, Mr. H. W. Miller; second, Mr. J. Freeman; third, Mr. A. Gilbert. One seedling show Auricula: First, Mr. A. Gilbert; second, Mr. H. W. Miller.

Special classes, open to all comers: Three show Auriculas, named, distinct: First, Mr. G. Savory; second, Mr. J. Freeman; third, Mr. T. M. Eglinton. Three alpine Auriculas, named, distinct: First, Mr. J. Freeman; second, Mr. H. W. Miller; third, Mr. G. Savory.

Mr. G. Savory was awarded the society's certificate for the premier Auricula in the special classes, and Mr. H. W. Miller the society's certificate for the premier Auricula in the members' classes. A bronze medal was gained by Mr. E. J. Keeling for the most points in the classes for Narcissi, and by Mr. H. W. Miller in the classes for Auriculas. A certificate was also presented to Mr. C. J. Fox for an exhibit of alpine blooms and other spring flowers.

THE NATIONAL AURICULA EXHIBITION.

WHATEVER may have been the opinions of the promoters on the merits of their exhibition at the Royal Horticultural Hall on the 30th ult., it certainly must have been disappointing to visitors. The table devoted to the show section, which comprises white, grey and green edged and self flowers, had a singularly dull and unattractive appearance, so many of the flowers being stale or otherwise indifferently developed. The corresponding table immediately opposite was, on the other hand, singularly bright with the beautiful gold or white centred alpines, the classes being better filled, showing that while these varieties are easier to grow, they further give much greater floral beauty in return for cultivation. The connoisseur in the shows must be something of an enthusiast over markings, edgings and other attributes; but the average lover of Auriculas admires them for their colour-beauty and undoubted charm, hence he turns to the alpines naturally.

Among edged shows, G. Lightbody, Acme, Eucharis, Richard Headley, Shirley Hibberd and Heatherbell (all old ones) were of the best; and of selfs, Mikado, Peggy Gordon, Harrison Weir, Mrs. Phillips and Victor (maroon crimson), this variety securing the premier award as the best show variety in the exhibition. In the classes for singles, Prince Charming, Rifleman and Shirley Hibberd were the best green edged; with greys, the old G. Lightbody and Richard Headley; with whites, Acme; and with selfs, Mikado (maroon) and Peggy Gordon (red). There were no seedlings worthy of notice. The fancy class brought two collections. The best of these flowers are the yellow selfs, which are charming. Canary Bird, Sunray and Maggie Burk were very bright. It is a pity a special class is not instituted for pure yellow selfs; then all other fancies could go to the rubbish-heap. It is well to notice that while florally the distinctions between shows and alpines are important, shows may be mealy all over, but alpines must be quite devoid of meal.

In the alpine section there were five entries of twenty-four plants, thus showing how popular they are. Here, as was the case in all the open classes, Mr. James Douglas was a prominent prize-winner. In the class the most striking gold centres were Duke of York,

Golden Distinction, Majestic and Golden Eye; while white centres were Roxburgh, Argus, Robert Bruce and Prince of Tyre. In Messrs. Phillips and Taylor's second-prize group Mars was the premier gold-centred flower in the section. Others good were The Idol and Her Grace, and of whites Argus and several seedlings. In other classes Muriel, Charles Halcro, Chaucer, Dean Hole and Sunrise were good gold centres; and of whites Ilene, Blue Bell, Lucrece and Phyllis Douglas. In single plants with gold centres, Muriel (a far better flower than Mars) was first, with Majestic second and third. Phyllis Douglas was the best white centre, with Prince of Tyre and Roxburgh following. Polyanthus of the border varieties, which usually make so conspicuous a feature in groups, baskets, or in pots, were practically absent, only nine small ones or Primroses being set up, and those were worthless. The *Primula* species were represented by one small basket of four kinds—*obconica*, *japonica*, *Sieboldii* and *malacoides*. How we sigh for the collections of those beautiful Primroses once shown in such profusion! Clearly the National Auricula Society wants some revival of its old glory, or else be quietly laid to rest. A further need is improved naming, as at present only labels are used, and those are buried behind the foliage.

** Owing to the demand made on our space by other subjects, we are compelled to hold over the report of the Midland Auricula Show. This will appear next week.

OBITUARY.

THOMAS JONES.

By the death of this gentleman there passes away, in his eighty-sixth year, one of the foremost of British gardeners of the older generation. For nineteen years he was head-gardener to Her late Majesty Queen Victoria at the Royal Gardens, Windsor and Frogmore, succeeding the late Mr. Rose in that position. Mr. Jones retired from the Royal service on a pension twenty-one years ago, and has since lived on a property he purchased at a pretty country village (Puttingham) near Wolverhampton. Here he passed away his time among surroundings congenial to his nature and to his life-long work, namely, gardening and farming (in a small way). Born at a farm in Denbighshire, North Wales, he never lost his love for farming, cattle, horses and dogs and all appertaining to that life always appealing strongly to his nature. As a gardener, possibly fruit and vegetable culture appealed to him more strongly than did other aspects of garden work, although in a garden of the extent and importance of that at Windsor all other aspects of practical gardening claimed and engrossed the whole of his time and care. Mr. Jones was a gentleman of strong personality and character. He was absolutely indifferent to the applause or the criticism of the world of gardening outside, content to pursue his own life in his own way. By strangers he was apt to be written down as a martinet, and of austere and uncompromising demeanour. But to those who knew him well he revealed himself as a genial, kind-hearted and most entertaining man. He was a gentleman who never spared himself, but gave his life wholly to his profession, earning and retaining the full confidence and appreciation of his Royal employer to the last. Mrs. Jones predeceased him by some years. They had no family. Previous to going to Windsor he had been head-gardener to Lord Leconfield at Petworth for many years.

"Country Life" for May 11 contains, among other articles, an illustrated account of "Buckhurst Park.—I."; "Tale of Country Life: Throosh—A Legend of Loch Gur," by Dorothy Conyers; "The Songs of Labour"; "On the Growth of Two Salmon" (illustrated), by J. A. Milne; "The Time of the Singing of Birds" (illustrated), by E. L. Turner; "British Birds and Their Observers."

** The Yearly Subscription to THE GARDEN is: Inland, 6s. 6d.; Foreign, 8s. 9d.

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ORCHARD AND WOODLAND

SATURDAY,

MAY 18, 1912.

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26th SEASON.

J. B. HOUGHTON, Esq., Runcorn, writes, April 13th: "Plants to hand in good order and condition. I must congratulate you on the excellent way the goods were packed. It reflects very great credit on those responsible for the work."

The above original letters can be seen in my office, and thousands of similar ones, gained by sheer merit and superlative value.

Mrs. GLOSSOP, Whitechapel Manor, S. Molton, writes, April 16th: "Many thanks for plants. They arrived quite beautifully packed, and are now all planted, and look as fresh as if they had never been removed."

Mrs. GRIFFITHS, Sedlescombe Road, St. Leonards-on-Sea, writes, May 4th: "Mrs. Griffiths wishes to thank Mrs. Gardner for the splendid plants sent, and for the very generous quantity, they were beautifully packed and arrived in excellent condition."

OR TREES? WHY RISK DISAPPOINTMENT?

SPECIAL OFFER, MIXED CARNATIONS.—All strong autumn rooted layers, to bloom abundantly this year. Having lost the names and got several lots mixed up; these are from my splendid collection of yellow, crimson, white, scarlet, pink, purple and white, etc. Many amongst this lot worth from 1/- to 2/6; 6 for 2/-; 12 for 3/6; 25 for 6/6.

CRIMSON CLOVE CARNATIONS.—The true old delicious spice-scented variety, now very scarce. Healthy, well-rooted plants, 3 for 1/3, 6 for 2/-, 12 for 3/6.

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HARDY OUTDOOR CHRYSANTHEMUMS.—Every body likes these; splendid colours; grand for cutting in autumn; perfectly hardy. Grand, well-rooted plants. Succeed anywhere planted out now. 6 for 1/3; 12 for 2/3; 25 for 4/- Give armfuls of glorious blossoms for cutting when flowers are scarce in autumn.

Miss COXHEAD, Newbury, writes, May 1st: "The Chrysanthemums I got from you last year gave me great pleasure and satisfaction."

HYBRID PYRETHRUMS, or Hardy French Marguerites.—Large, handsome flowers, of many rich and beautiful colours, including white, cream, pink, cardinal, and many other shades to rich crimson. Never fail to give pleasure wherever planted. 6 for 1/6; 12 for 2/6.

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COLLECTION OF PLANTS for sunny borders, shady borders, rockery, Tall Plants for back of borders, or Dwarf Plants for front of borders, 5/-, 10/-, 15/- and 21/-. Packed free carriage paid. Also Collection for Greenhouse, 2/6, 10/-, and 15/-, carriage paid.

HELIOTROPE "LORD ROBERTS."—Magnificent rich dark blue variety, deliciously fragrant, grand for greenhouse or bedding. 6 for 1/3; 12 for 2/-; 25 for 4/- Grand hardy plants from outdoors.

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ICELAND POPPIES.—Perennials, but bloom year after year. Very handsome and graceful, and particularly desirable, because they furnish us with a colour hitherto lacking in these flowers. The yellow and orange shades are particularly fine, and the white is very pure. 6 for 1/3; 12 for 2/6.

POTENTILLA CRIMSON QUEEN.—A true perennial, and magnificent for summer bedding; beautiful blossoms of deep rich velvety crimson, blooming the whole summer. Having a grand stock, I offer at less than price. 12 for 1/6; 25 for 2/9; 50 for 5/-.

PENTSTEMON BARBATA.—Superb spikes of splendid coral red bloom; doubtless one of the finest hardy perennials that can be grown, it produces an effect that is brilliant but refined, and the graceful beauty of the plant adds much to its charms. 6 for 1/6; 12 for 2/6.

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MRS. CHICHESTER.—"Another lovely Viola, crested with heliotrope border, large bold upstanding blossom. One of the Blues, most brilliant of all blue Violas. Both at same price as Mauve Queen.

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THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

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NOTES OF THE WEEK.

Paulownia imperialis Flowering Outdoors.—During the past week flowers of this beautiful tree have reached us from Devonshire and Somersetshire respectively. In one instance this is the first time the tree has flowered for twenty-five years. Possibly the excessive heat of last summer ripened the wood extra well, and thus induced the formation of flower-buds.

The Mountain Avens.—*Dryas octopetala* is a plant we do not too frequently see doing well in the rock garden, and in some soils it apparently refuses to grow and dwindles away. Some attribute this to want of moisture and peaty soil, but its real need is lime, and this should be supplied if the *Dryas* is to be really healthy and happy. We saw a very fine plant the other day in quite a dry place, which never thrived until it was supplied with plenty of lime. Then it began to thrive and grew apace, until it has formed a plant of exceptional beauty and size. It is more difficult to induce it to bloom as freely as on its native hills, and the plant referred to does not flower quite so well as is desired. It, however, produces a fair number of its fine white flowers. Sun and lime, with some peat in the compost, will do well for the Mountain Avens, which is so beautiful in or out of bloom.

An Interesting Chinese Honeysuckle.—The sunny summer of 1911 has been responsible for numerous shrubs flowering more freely than usual, owing to the wood becoming thoroughly ripened, and this is the case with several of the bush Honeysuckles. *Lonicera tatarica* is flowering with great freedom at Kew, and a large bush in the vicinity of the Ferneries is a mass of bloom. *L. tatarica* is a native of Siberia and North China, and grows into a bush 12 feet or 15 feet high and as far through. As is the case with other bushy species, the flowers are borne in pairs from the leaf-axils, and not in many-flowered heads as is usual with the trailing kinds. The flowers of the type are white or but faintly tinged with rose; but there are varieties which have pink and red blooms, two very good coloured kinds being *pulcherrima* and *punicea*. *L. tatarica* requires no elaborate cultivation, for given good garden soil it grows quickly. Ordinarily, plants are not more than half as well flowered as they are this year.

Double Wallflower Harpur-Crewe.—This old Wallflower, known long before the time of the revered flower-lover whose name it bears, is, as usual, doing well this season and is giving great quantities of its pleasing yellow flowers. It is not to be placed in the same plane as the double German Wallflowers, but is a much more delightful plant. This is said without any attempt to disparage the German Wallflowers, which are very

fine in their own way, but a good bush of Harpur-Crewe three or four years old will give a host of neat spikes of fragrant double yellow flowers, and is quite in place in a good border or on a rock garden. It is readily propagated by cuttings, and it is always desirable to have a few of these in case the old plants succumb to the winter, although this *Cheiranthus* is wonderfully hardy and long-lived. It does best on a dry and sunny place, and is always acceptable both for its beauty and for the exquisite fragrance.

The International Horticultural Exhibition.—This exhibition, which is to be opened next Wednesday by His Majesty the King, promises to be the largest and best of its kind that has ever been held in this country, and will be an event that those who see it will, we hope, look back upon with considerable pleasure. But there will be many who, from some cause or another, will not be able to visit the exhibition; and in response to the wishes of a number of such readers, we shall next week publish a Special Double Number. This will contain a sixteen-page supplement, giving details of all the best things to be seen at the exhibition, as well as a number of illustrations prepared from photographs of the exhibits. Some interesting illustrations of Chelsea Hospital itself, together with a brief account of this historical home for pensioners of the British Army, will also be included. The price of this special issue will be twopence, and copies will be on sale at our kiosk in the exhibition grounds at Chelsea on Thursday afternoon, May 23. We shall be pleased to welcome any of our readers who care to call at this kiosk, which will be situated in the Central Avenue.

A Pretty New Fuchsia.—In the early part of last year a seedling Fuchsia was forwarded by a correspondent with a request for our opinion concerning it. At that time it struck us as an extremely pretty variety, an opinion strengthened by seeing some flowering examples in the winter. It was placed before the floral committee of the Royal Horticultural Society on April 30th by Messrs. W. H. Rogers and Son, Red Lodge Nursery, Southampton, but did not get an award. Still, we think that is bound to come if further shown. The name is *Benita*, and it is said to be the result of a cross between a Continental variety—*Gartenmeister Bonstedt*—and *F. splendens*. The flowers, which are borne in great profusion at the ends of the shoots, are about an inch long, and hang suspended by slender pedicels of the same length. The stout tube of the flower and the sepals, which, however, never reflex, are of a rosy scarlet colour, while the petals are of a bright orange scarlet. It is of a freely branching habit and flowers profusely. As *Gartenmeister Bonstedt* has resulted from the crossing and intercrossing of *F. triphylla*, *F. fulgens* and, perhaps, others, the variety *Benita* has in it the blood of at least three distinct species.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Hyacinths and Abutilons.—Seeing the photograph of Grand Maître Hyacinths at Hampton Court in THE GARDEN for April 27 prompts me to record that I saw the same variety of Hyacinth most effectively employed this season in a public garden as dot plants in a groundwork of the ordinary Jonquil. The latter was indeed a fine set-off for the large azure blue spikes. In THE GARDEN of May 4, page 219, "Avon" has an interesting article on Abutilons, but he makes no mention of their usage out of doors. In fact, he seems to imply indoor treatment only by suggesting a cool structure for the summer months. Some of the varieties at least make splendid summer bedding plants. Has he not tried any? Since living in North London I saw a variegated variety in use in a neighbouring garden. It may have been *Thompsonii*. At a former place—Eaton Hall, Chester—Abutilons were used in the summer beds. I particularly remember a variety with mottled leaves being used dotted among certain beds of *Violas*.—C. T.

Rosa Hugonis Flowering Early.—This delightful little Rose was in full bloom with me on May 6, seven days earlier than the first bloom opened last year. Excepting for a stray bloom of the common China and *Cramoisi Supérieure*, this is the first-comer of the glorious Rose season which it ushers in. It is a lovely colour, a clear pale yellow, its single flowers being about one and a-half inches across and of cupped form. They are borne singly on short stalks the whole length of the growths, so that to prune this Rose would be to cut away its blooms. In growth it is unique, the prickles being of large size and the whole plant extremely pretty, even when not in bloom. There is a fragrance not unlike the Austrian Briars, only not so strong. Grown as a single bush upon the lawn in the centre of a bed of *Geum minimum*, or, better still, of that marvellously rich-coloured *Geum Mrs. Bradshaw*, the effect would be delightful in the early May days.—W. EASLEA, *Eastwood, Essex*.

Potentilla Valderia.—With reference to Mr. Arnott's note on *Potentilla Valderia*, page 227, issue May 11, this plant, like *Viola Valderia*, takes its name from the Bagni di Valdieri, a charming health station of hot springs in the Gesso Valley on the north side of the Maritime Alps, immediately at the foot of the Argentera. The locality, besides its great beauty, is a very rich centre for plants, both *Saxifraga pedemontana* and *S. florulenta* having stations close at hand. The *Potentilla* abounds in stony places by the river, especially about a quarter of a mile below the hotel. The true *Potentilla Valderia* is distinguished by foliage of an extraordinarily beautiful argentine effect, the three-lobed leaves being neither green nor variegated in any way, but as if actually cut out of silver. In Nature the plant is very robust and stalwart, attaining a height of some two feet; in cultivation it has with me always remained quite neat and dwarf. It also shows an extreme reluctance to flower, a fault, however, which one regrets the less in that the flowers, carried in tall, leafy cymes, are not up to the promise of the plant's foliage charm, having narrow white petals, between which appear the broad green sepals, giving the bloom a rather dingy effect.

Full notes and description of this species will be found in my "Among the Hills."—REGINALD FARRER.

Exhibiting Daffodils.—Mr. Jacob invites criticism of his selection of the best flowers at the Royal Horticultural Society's Daffodil show, page 220, issue May 4. The flowers he mentions as the best I also think were in "the first flight," but I do not agree with Mr. Jacob's idea of "placing." When you try to do so in the case of such dissimilar flowers as he describes, I think you attempt the impossible. If you say Avalon is the best of its class, one knows where one is; but to say that it is better than Susan (what a name!) is like saying a handsome brunette is better than a lovely blonde! Let us call them first-class flowers of their respective divisions. In addition to the flowers Mr. Jacob mentions, there was a *Poeticus* on Mr. Engleheart's stand which subsequently appeared on Mr. Wilson's stand that I think was of its "class" a very fine thing, and seemed to run *Coronation* very close. It was very large and round, with a distinct red-rimmed eye of pleasing form. There were also two very fine flowers of their class shown by Mr. Crosfield, viz., Dick Turpin and Mougles, both flat-cupped *Barris* (with apologies to the framers of the list classification), petals very overlapping, of a creamy white, 3-inch spread, very serrated red orange eyes; much alike, but I thought Dick Turpin would be the better flower. Olivia, another of Mr. Crosfield's flowers, was a very beautiful *Leedsii*, with pure white petals, very broad. The short trumpet of palest yellow, much crinkled or frilled at the edge, has a suspicion of green in it. Other flowers I have noticed at the Royal Horticultural Society's and other shows are: Adela, a *Barri* with pure white, overlapping, slightly recurving petals, 3½-inch spread, with a very pretty pale yellow crinkled eye with a green centre. Black Chief, an all-red eyed *Poet* (Engleheart) with an extraordinarily dark edge that looks almost black, which I saw subsequently on Mr. Bourne's stand. Boadicea, enormous white trumpet, slightly hooded. Clipper, large starry-petalled flower, clear self orange red cup, 1-inch spread and three-quarters of an inch deep, serrated edge (Wilson). Deepdale, a giant *Leedsii*, which was given an award of merit at Edgbaston (Milner). Dovedale, large, even-petalled flower, dark yellow cup, thin red edge (Milner). Felix, a seedling from Brodie (Jeannie Woodhouse × King Alfred), dark yellow trumpet, very reflexed rim, yellow hooded perianth. Finespun (Cartwright and Goodwin), large long-cupped. King Cup, said to be the result of the cross King Alfred and Mme. de Graaff. Flame (which, by the by, is a theft of a name registered by me!), a flat orange scarlet-eyed satiny white flower raised by Mr. Engleheart, and now in Messrs. Cartwright and Goodwin's hands, I believe. Idris, a large *Leedsii* with small cup of pleasing yellow (Watts). Imperialist, large orange flat eye, pure white perianth, 3½-inch spread, broad petals, 1½ inches, rather blunt-ended. Henry James, a flat golden yellow-eyed flower, with fine large petals white and overlapping. King George IV., a narrow-petalled *Miss Willmott*. Killecrankie (Crosfield), a large yellow trumpet *Leedsii*. La Lure, an enormous-mouthed short trumpet 2 inches across by 1½ inches deep, of pleasing light yellow colour; perianth white, of great substance; broad petals 1½ inches by 1½ inches, small petals 1 inch broad. Little Joan, already described by Mr. Jacob, a lovely Ivory and Pink shell-like flower. Marsh

Maiden, a very good pure white trumpet, flower-perianth broad and overlapping, but not quite smooth; trumpet shortish, and very much turned back and frilled at edge. Potent, a magnificent giant *Leedsii*. Roseate Dawn (shown as Early Dawn), a very open-mouthed *Leedsii*; trumpet much serrated and reflexed, and coloured distinctly a pink shade at mouth; perianth with 1½-inch petals, 1½ inches broad. Vestal Virgin, a massive white trumpet flower; perianth 1½ inches; petal, 2 inches long; trumpet palest lemon, 1½ inches long, 1½ inches wide; lip turned well back, slightly drooping; 18-inch stem. May I add that Pink Beauty and Chameleon have flowered very well with me this year, the former making a most delicate bit of colour in the flower-beds.—C. LEMESLE ADAMS.

Fruit Blossom and Frost.—The note under the above heading on page 225 of last week's issue compels attention to the immense importance of affording some effective protection to the trees during the flowering period. The fruit-growing industry has grown so enormously of late years that it may now justly be called a national industry of no mean importance, and the loss sustained by those engaged in the business is a heavy one, with, unfortunately, no chance of making it good until another year. If such more or less preventable damage was inflicted periodically on the property of other traders or professionals, there would have been such a hue and cry against it that a remedy by protection or insurance, or in some other effective way, would have been forthcoming long ago. But the sufferers being simply poor horticulturists—a body without soul, unity or purpose, as far as its national interests and existence are concerned—the tragedy goes on, and apparently is likely to go on for ever. Cannot something be done to, at any rate, mitigate the severity of the losses? Could not a Government Commission be appointed to take evidence and find out, if possible, whether any effective and practicable scheme entailing but moderate cost in its application could be found; and if found, its provisions made compulsory by law, the same as is the case now in respect to the Gooseberry mildew? Something effective in this direction has already been done, especially in the county of Worcester, where much land is now given over to fruit culture. One gentleman, Mr. Bomford of Leigh Farm, near Worcester, a large grower, with whom I had a conversation on the subject last winter, has great faith in the efficacy of a strong pother of warm smoke emitted from lamps secured to stakes and fixed at certain distances apart throughout his orchard. He has had the system in operation for many years, and he assured me that in consequence he had had only two failures of crops in thirteen years, and that some of his crops in some seasons more than bought the freehold of the ground on which they were growing. The orchard in question consisted of Apples, Plums, Gooseberries and Black Currants. The lamps are filled with a liquid which, when ignited, gives off a strong pother of warm, dense smoke, which warms the air and thus keeps frost at defiance. An alarm is provided in the orchard by fixing a thermometer in an exposed part with an electric wire and bell attached. The bell rings in Mr. Bomford's room as soon as the mercury in the thermometer falls to freezing-point. The lamps are then lit, no matter what time of the night it may be, if deemed necessary. The cost is said to be comparatively small.—OWEN THOMAS.

Grape Hyacinths as Cut Flowers.—It is, of course, a matter of taste, but I can hardly imagine short-stemmed flowers like the Muscari looking their best in vases a foot high as advised on page 189, April 20 issue. When having occasion to use them, I find they are much more effective when arranged in shallow bowls as a groundwork for the smaller-flowered Narcissi. A very charming combination is Narcissus Leedsii Mrs. Langtry or Duchess of Brabant and Muscari Heavenly Blue. In the borders, planted alternately in bold clumps with the yellow or sulphur Daffodils, they are equally effective and make a pleasant contrast of colour.—H. S. W.

Bedding Tulips.—Like your correspondent "A. D., Kingston-on-Thames," who writes on page 202, issue April 27, I have never seen Tulips better in colour, evenness of flowers, and in other ways more satisfactory than they have been during the present spring. When the plants first showed their flower-stems, they looked somewhat weakly, but directly the warmer weather came they commenced to strengthen rapidly. In the Bournemouth public gardens there are many large beds filled with Tulips mainly, and they have been splendid, large blooms borne on long but stout stems. The flowers are very even in size, and there are no gaps. Undoubtedly the bulbs were well ripened last summer, and in proof of this, when the bulbs came to hand in the autumn, many of them peeled very much; but, of course, the loss of the outer skin in no way interfered with the flowering of the bulbs.—G. G.

Exhibition versus Private Garden Flowers.—"An Amateur," page 214, issue May 4, seems to have a grievance against exhibition flowers, and lays extra stress upon professional florists and their advertisements. Having had a very wide experience of exhibitions in various parts of the country, I do not hesitate to say that the amateur cultivators are now in the front rank as exhibitors; furthermore, that shows are far more numerous now than they were a generation ago, and that it is to a very great extent owing to the produce staged at the exhibitions that emulation has been widely roused among amateurs, and the beneficial effect in the gardens throughout the country is now only too apparent. I need only refer to the improvement in Roses, Carnations, Begonias, and alpine plants. People flock to the shows in order to learn, to see the advance made in garden produce. Witness the Sweet Peas and the herbaceous flowers now staged at exhibitions. Do they not suggest cut-and-come-again in their case? I think so. I do not wish to write a long note on this subject, but would like to say, that the public are the best judges, after all, and flowers are universally grown according to their approval or disapproval, and the professional florists are the first to find out this.—B.

FORTHCOMING EVENTS.

May 21.—Preston (Somerset) Gardeners' Society's Meeting. Croydon Horticultural Mutual Improvement Society's Meeting.

May 22.—Royal International Horticultural Exhibition. Opening ceremony by His Majesty the King at 12 noon in the Chelsea Hospital Gardens. Exhibition open to the public on every day until May 30 inclusive. Bath and West and Southern Counties Show at Bath (five days). Royal Botanic Society's Meeting.

May 24.—Linnean Society's Meeting and Anniversary. Hertford Horticultural Society's Meeting.

May 25.—Wakefield Paxton Meeting.

THE ROSE GARDEN.

THE MUSK ROSES.

THE Immortal Bard, when he alluded to "sweet Musk Roses" in "A Midsummer Night's Dream," had probably some other Rose in mind than Rosa moschata, or Brunonii as it is sometimes called, for this species has very little of the fragrance of Musk about it; in fact, Mr. Sawyer, in his interesting discourse on the odour of the Rose in "Rhodologia," says that R. Brunonii develops a fine odour of Pinks.

In some of the varieties that are descendants of R. moschata there is a distinct Musk-like fragrance very perceptible after a shower.

The species is found from Southern Europe to India, which may account for its somewhat tender nature; but there are few gardens in England where it could not be grown, although it seems to revel in gardens near the coast. I have seen some magnificent examples of R. moschata in the late Lord Battersea's lovely gardens near Cromer.

Like many rambling Roses, the Musk Rose likes a position where it can ramble away unmolested by pruning-shears, and it makes a fine show drooping from a lofty balcony or clambering over an old tree. There are some interesting Hybrid Musk Roses now in cultivation, and perhaps it may be well to name a few. I quite expect this species will be used by hybridisers more frequently than hitherto. I see Messrs. Paul and Son of Cheshunt, ever alive to the creation of good garden Roses, are crossing the Polyanthas and Musk Roses together. A novelty they announce for distribution in June is named

Queen of the Musks, and it is described as a new departure in the Dwarf Polyantha Roses, the novelty having large bunches of creamy white flowers with pink centres, the buds being rosy pink. Another fine Rose from the same raisers is

Snowstorm, producing an almost continuous display of white, semi-double blooms. In growth it resembles Alister Stella Gray, so that it may be the forerunner of a race of perpetual-flowering semi-climbers. Already we have promise of some good things among these semi-climbers, and our gardens will welcome every one, so that the pillars at least, if not the arches, will be gay with bloom at a season of the year when we value them so much.

The Garland is undoubtedly a Hybrid Musk. It makes a perfect fountain of bloom if planted as a free bush where it can have abundance of space. A position of about five yards square would be none too much for a single plant, and there are many gardens where this could be given on the lawn or in an open space in a wood. To see such Roses grow to perfection, large holes should be taken out fully 3 feet deep and wide and filled with good soil and manure. What a delight it would be to come upon such specimens even in the woods and copses that adjoin many gardens! One plant will carry thousands of blooms, which expand about mid-July and exhale quite a Musk-like fragrance. The blooms are buff-coloured.

Mme. d'Arblay, too, is finding favour more every year, its lovely semi-double, snow-white blooms being produced in great profusion, normally about the end of June; but here, on May 1, it was already in bud this year, which shows how remarkably early some things are. Mme. d'Arblay will make huge, thick growths with very formidable prickles. It is best seen, I think, as a pillar Rose.

Rosa Pissardii is another hybrid that possesses the perpetual-flowering character, and which should be serviceable to the hybridist. There are two forms, one white and the other pink.

R. moschata alba, although so named, cannot be related to the true Musk Roses. I should say it belongs more nearly to R. gallica.

Rivers' Musk is a pretty autumn-flowering hybrid with buff pink blooms, double, and of nice form.

Eliza Werry has large trusses of small nankeen-coloured blooms, produced about the third week in July.

Fringed Musk has cup-shaped flowers of buff white colour, and

Princesse de Nassau bears yellowish straw-coloured cup-shaped flowers, very sweet and double. These last four would be excellent as pillar Roses to flower about the third week in July.

One could readily believe that the old Noisette Roses have descended from R. moschata crossed with some other species, for they possess that aromatic fragrance so peculiar to the Musk Roses, and, as I said before, there is scope for the hybridist to use these to great advantage. P.

OUR SUMMER ROSES.

WHILE looking at the display of Tea and Hybrid Tea Roses last autumn, the thought came to me how very few years ago it was since the term "summer" Roses was applied to those that only bloomed once in the season; also, how very few we had that were worthy of the name of summer bloomers. Now we do not have to grow so many varieties in order to keep up a succession of flowers, for the true summer bloomers are the beautiful hybrids that do not leave us from June until that first severe frost arrives which cuts down all floral beauty. In constant succession there are blooms of Mme. Ravary, Anna Olivier, Peace, G. Nabonnand, General Macarthur, Le Progrès, Mme. Antoine Mari, Corallina, Melanie Soupert, Viscountess Folkestone, Richmond and Grüss an Teplitz, to name the first dozen occurring to me as I write. There are a hundred more varieties among which it would be hard to say which are the most generally useful. About twenty years ago the National Rose Society and many growers were strongly against forming this new class. But it soon came to pass that only a very few could refrain from making some distinction as the several beautiful introductions followed year by year. It is invidious to choose one class or section alone, for all are beautiful and well suited for some purpose; the sole fault lies in our not studying the best purpose more closely. In all classes or sections there are varieties now which are totally different in habit to the general character, and consequently the purposes they are best adapted for differ considerably.

I am certain a bed of Mme Ravary, also one of Mme. Pol Varin-Bernier that I saw last autumn, could not have been improved upon for massing. And yet how often we find ill-placed mixed beds, from which the effect is never so pleasing. To plant a variety which throws up an occasional growth of extra strength by the side of one that is invariably compact makes the whole effect bad. I did not think of giving any descriptions of varieties here nor names. Any good catalogue will afford them far better than can be done in a short article of this description; but I would remind any prospective purchasers that they may depend upon the sorts a recognised grower describes as being most reliable, and we have, fortunately, many such now. A. P.

THE GREENHOUSE.

DAPHNE ODORA ALBA.

THE beautiful *Daphne odora* and its varieties *rubra* and *alba* are largely cultivated in gardens, being highly prized for their deliciously fragrant flowers, which are produced during the first three months of the year, a

season when such flowers as those of the *Daphne* are particularly valuable. Although they will succeed and flower profusely out of doors in the warmer parts of the country, they are, strictly speaking, cool greenhouse plants.

As these *Daphnes* are somewhat slow-growing, they require careful treatment, and on no account should they be overpotted. Watering must also be carefully attended to, especially in winter. During the growing season the plants delight in a warm, moist atmosphere. After growth is completed for the season, place them in a drier and more airy situation; this will enable the wood to become thoroughly ripened, which is necessary for the production of flowers.

The plants will succeed best in a rich, open compost consisting of two parts peat to one part of fibrous loam, with a good proportion of sand added. Good drainage is also an essential point. Propagation may be effected either by cuttings or grafting, using *D. Laureola* as a stock. Plants, however, on their own roots are to be preferred, these being generally longer-lived than grafted plants. Cuttings of the half-ripened wood taken off in August root readily if inserted in sandy soil and placed in a propagating-case with a temperature of 55°.

Although the variety *alba* illustrated on this page is not so often met with as *D. rubra*, it is quite as beautiful, and is to be especially recommended where white flowers are in demand. *D. odora* is a native of China, and was introduced into this country in 1771. It is more generally met with in gardens under the name of *D. indica*.

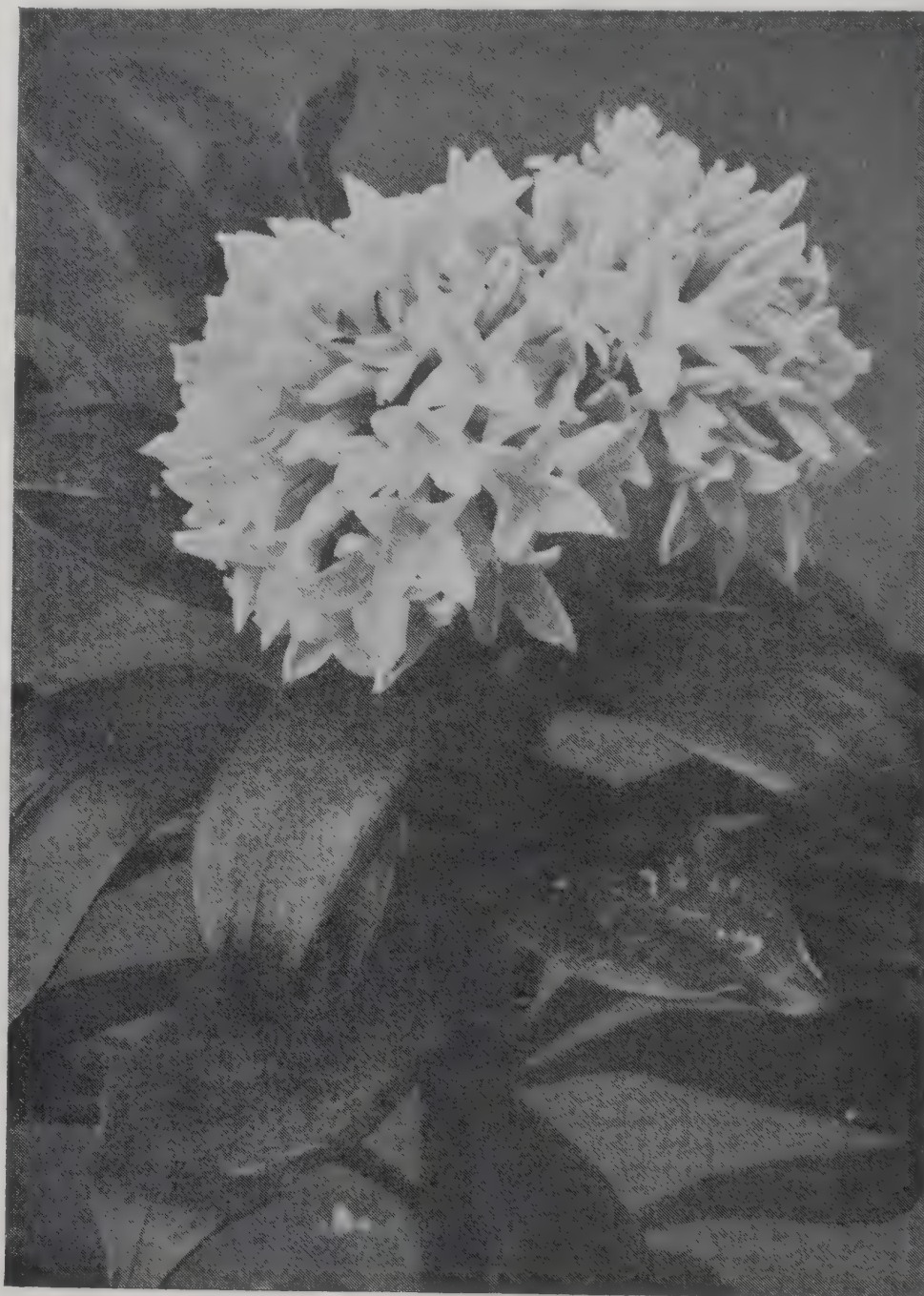
W. T.

A SWEET-SCENTED GREENHOUSE PLANT.

ALL lovers of sweet-scented flowers should grow *Boronia megastigma*, a charming denizen of New South Wales, whose small, cup-shaped bells, maroon on the outside and yellow within, hang poised from the whole length of the slender, graceful shoots. It is the possessor of fragrance of a high and rare order; high because of the delicacy of its perfume, which is refined and almost indescribable, about which there is nothing redundant or cloying; and rare because of its extraordinary carrying power. A single plant will waft its aromatic message through a whole house, and a *Magnolia's* sumptuous perfume can scarcely do

more. When 5 yards distant from the open door of a greenhouse in which a solitary plant of this *Boronia* is in flower, one becomes conscious of its odour, yet the scent, though perceptible at long distances, is never powerful.

Flowering plants of this *Boronia* may at the present day be purchased at a low price. If these—after their blossoms, which are very lasting, have faded—are cut hard back and, after breaking again, are repotted, care being taken that the roots



FLOWERING SPRAY OF DAPHNE ODORA ALBA, A FRAGRANT PLANT FOR THE GREENHOUSE.

are not disturbed, and given a shift into pots one size larger, using peat and a little sand, and keeping them in a warmer position for a week or two, they will soon throw out shoots, which, if an increase is desired, may be taken off when about two inches long, inserted in well-drained pans in equal parts of peat and sand, and placed in a warm house in a propagating frame until rooted, shading from sunlight when necessary. When well rooted, they may be potted off singly, the tops being pinched when they show signs of renewed growth.

The old plants, when their growth is completed, should be placed in the open for a month or six weeks, in order to solidify the wood. In sheltered gardens in Devon and Cornwall, *B. megastigma* is often grown in the open, and may be seen in the late spring bearing a good crop of its deliciously-scented flowers.

WYNDHAM FITZHERBERT.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

The Buds.—A considerable diversity of opinion exists as to the extent to which Carnations and Picotees growing in borders ought to be disbudded. There are some cultivators who do not hesitate to decide in favour of the removal of all

except the crown or central bud, others are equally as firmly convinced that three buds is the correct number to retain; while a third group avers that not one bud should be removed, because so doing constitutes an unnatural method of culture. Personally, I much prefer to rest among the second section, as I think that a group of three perfectly-formed flowers is the acme of beauty. Something must be said in favour of the most severe form of disbudding, and which is only had recourse to, as a rule, by those who hold exhibiting the principal object of culture. My sole reason for not advocating it lies in the fact that it has a tendency to encourage coarse blooms. A plant in splendid health, with its roots working in excellent soil, builds up immense energy, and it is seldom conducive to refinement to restrict the flowers to one on each stem. For size the individual bloom has the lead, and if coarseness does not accompany the repression, any objection to the practice falls to the ground. I have no sympathy with those who do no disbudding at all, as I think that the plant loses materially in charm. The suggestion that the system is unnatural is puerile. Scarcely any plants are grown quite naturally, and it is certainly intended that we shall vary from the normal if such variation tends to our substantial advantage.

Supporting Flower-Stems.

It is essential that this shall have the most careful attention. There are several ways of doing it, of which the worst, and

it is to be feared the commonest, is to put one stick in the middle and pass a piece of bast or string round the stake and shoots. This brings them together in an ugly mass, and, apart from destroying the attractiveness of the habit of the plant, puts beyond the realms of possibility the development of any perfect flowers. Another method is to use galvanised twisted supports, and against these little can be said, provided that the grower is incessantly on the watch to see that the stem does not kink in the twists. If this occurs, the beauty of the flowers is minimised if not destroyed. The third system is to place a slender stick for each stem, attaching it with a thin strand of bast. More time is involved when the work is done in this manner, but there is no doubt that it is extremely satisfactory.

Green Fly and Thrips.—The grower of Carnations out of doors cannot claim that many enemies attack his plants when the conditions of soil and situation are favourable; but it is all too seldom that one wholly escapes from a visitation of green fly, and it is too common for thrips to gain a hold in many gardens. Either of these pests, if allowed to become comfortably and strongly established, will do vast injury and ruin all prospects of the finest results. Therefore cultivators must be constantly on the watch for them with a view to the destruction of the first one that comes along. The persistent searching may be a little monotonous, but it brings a wonderful pleasure when an enemy is seen to kill it without delay. The error of waiting until the pests are numerous is fatal, and entails endless labour and worry to ensure complete riddance. Syringing with pure water in the early hours of fine mornings is an excellent step towards prevention and suppression, but it must obviously be commenced in good time, or it will fail.

Hoeing.—Fresh air is as necessary to the maintenance of perfect health in the roots of the plants as it is to their top growth, and its admission ought to be encouraged at all seasons of the year. It is not a serious matter frequently to prick over the surface with a hand-fork, or to run the Dutch hoe between the rows if it can be managed without risk of injury to the roots or the stems, and air will then find its way in. The rains which fall will penetrate instead of running off, and air will assuredly follow the water. Beyond this, and in its way of equal importance, the dustiness of the top prevents the waste of plant food by the ever-proceeding capillary attraction. F. R.

A LITTLE - KNOWN ITALIAN SQUILL.

(SCILLA ITALICA ALBA.)

THE Italian Squill is a pretty Scilla which is not much known at the present time, and has been but seldom offered in catalogues until lately. A fresh supply has apparently been procured from Asia Minor, and bulbs have lately been catalogued and are sold in the shape of mixed varieties. The writer has cultivated the blue Italian Squill, originally introduced, I believe, from Italy (hence the name of *S. italica*), for a good number of years, and Maund figures in the "Botanic Garden" this and a white and a rose variety. The rose one does not seem to be procurable at present, but, through the kindness of a lady well known in the gardening world, I was favoured with a few bulbs of the white one, which is here figured from a photograph taken in April, 1912. It is a charming little plant, only about six inches to ten inches high, with conical heads of pure white flowers and neat leaves. This white variety increases more slowly than the blue one, and is as yet very scarce in

gardens. I cultivate it in light, well-drained soil, and with me it appears to have a preference for a semi-shady spot.

S. ARNOTT.

DAFFODIL NOTES.

Exhibition versus Private Garden Flowers.

I agree with "Amateur," page 214, issue May 4, more nearly than she thinks I do. As may be gathered from my notes in the issue of May 4, I fully recognise that a Daffodil for the exhibition and a Daffodil for the garden are more often than not two distinct things. The difficulty is how to let the "private public" know which are the best ones for their gardens. My suggestion is northern and southern trials, à la Sweet Peas; but without a National Daffodil Society I do not see how it can be satisfactorily accomplished. Like many other things in modern life about which we are doubtful, the "show" Daffodil has come to stay; at any rate, for some years yet. I very

they would be few. So with exhibitions—no "florist" flowers, no public. A second point of view is that Daffodil shows and the aiming at "show" blooms tend to the general improvement of the race, just as agricultural shows and racing promote the breeding of horses of better "stamp." Take some of the Daffodil cast-ups of the advancing tide. Take as typical examples White Lady, Lady Margaret Boscawen, Blackwell and Cornelia. As the refrain of a pantomime song of early days, which is continually jingling in my ear, says:

"What can you wish for more, my boys?
What can you wish for more?"

Hence I would ask "Amateur" and our friends the great "private public" to tolerate shows and what follows in their wake; but to remember when they attend them to order warily, and when in doubt to consult someone who knows the way of the creature.

Garden Varieties.—A great friend of mine, who is biting hard and whom I soon hope to hook as a Daffodil exhibitor, told me the other day that my notes this year had not been of such general interest as usual, because I had rather neglected the better average flowers. I presume he meant he was not prepared to buy such an admirable set as those Messrs. Pearson and Sons advertised in last week's GARDEN. I must own I have erred in this respect. I should have remembered that as things are, the "private public" must largely rely on note-writers like myself. *Peccavi*. And now to make amends if I can—to the garden plant-seekers first; to the would-be showman later on. Here are a few really good new things for the garden: Stromboli (Lilley of Guernsey), a grand palish yellow Ajax, whose special points are size, earliness and tall growth. Golden Spider (Polman Mooy), a slightly paler and later but better formed Golden Spur. I find it very free and a good doer. Solfatare, a most lasting yellow incomparabilis of medium height and pale pleasing colouring. Hall Caine (van Waveren), a tip-top garden variety of immense size and height, a little in the way of the old Frank Miles. It is some years since I first saw it at Hillegom, and forthwith transferred some of it to my own garden, where I am more and more impressed with it every year. Orient, the best and most lasting of all the Poetaz for out of



THE WHITE ITALIAN SQUILL, SCILLA ITALICA ALBA.

much doubt if even "Amateur" herself would not soon get tired of going to exhibitions where only good garden varieties were to be seen. I think from reading between the lines she recognises this. Theoretically, there should be, I suppose, some "sport" in shooting, and it should not be a sort of who-does-best at a flying target. Practically, it is found by those who give shooting-parties and want guests; it must be so, otherwise

doors. It has good foliage and bears almost always three large, undulating flowers on a stem which rises well above the leaves. In the distance it appears an ivory white, but on closer inspection one sees the pale yellow cup slightly margined with red. Thora (W. T. Ware), a giant Leedsii, tall and very free. With age the large cup assumes a more or less apricot tone, especially under glass. I could write an interesting history of the plant

and how I gradually found out its various qualities for pots and for exhibition on account of its wonderful colouring that comes with age, and for the garden because of its habit, freedom of flowering and size. Constellation, which reminds me of Cynosure, is a decided acquisition. It is very free and a splendid laster. Spinnaker (Hogg and Robertson) is a pointed Lady Margaret Boscawen and about equally effective. I mention it as it is not so expensive. Cassandra, Ben Jonson and Spenser are an excellent selection of the newer Poets, and they are chosen because they have not so much red to burn and because they do not go wingy. Until Florence Pearson and van Tubergen's Zwanenberg become "practical purchases," I do not see anything that ousts Mme. de Graaff from its position as premier white or palest bicolor trumpet. Of the deeper bicolors,

Duke of Bedford and Coronet both have their special claims to notice. The former has size and importance; the latter has earliness and distinctness in trumpet and colour. So I might go on with several more, and long as my list might grow, no red cups would be found in it. The omission is intentional. I would rather they were bought off the purchaser's own bat. With very few exceptions they all fade and "burn" unless they are in some way shaded. With regard to Seagull, White Lady, Lucifer, Blackwell and Torch, they are not mentioned, as I expect all garden planters of Daffodils know them so well.

THE BEST DAHLIAS AND THEIR CULTIVATION.

THE Dahlia is an ideal late summer and autumn flower, and is admirably adapted for town gardens where many other flowers will not thrive owing to the smoky atmosphere. I have seen perfect specimens of the Cactus type grown in Clerkenwell and Stoke Newington. In the former case they were grown in tubs on the flat roof of a house, and the receptacles used were the ordinary margarine or butter tubs, which were first thoroughly burnt out with lighted paper, and then holes about the size of a sixpence burned through the bottom for drainage.

The planting of Dahlias should be done now. The ground ought to be well dug over to a depth

of about two feet and thoroughly broken up, and a liberal quantity of old, well-rotted manure mixed with the soil. The plants, if grown in beds, should be quite 3 feet apart, and a strong stake should be placed in the soil at the time of planting about four inches away from the plant. The stake ought to be at least 5 feet in length. Novices often wonder why such long, unsightly stakes are put in at the time of planting; but to the experienced gardener it is obvious that to insert such a stake at a later period, when the plant has grown 2 feet to 3 feet in height, would mean irreparable damage to the tubers or roots. The plants should be well watered after they have been put in, and loosely but securely tied to the stake with raffia or bast. As the plant grows, the tying process should be continued, fresh raffia being added as needed.



A BEAUTIFUL ROCK GARDEN PLANT, ANDROSACE CHUMBYI. (See page 243.)

Some varieties grow much taller than others, and it is always better to consult a catalogue that explains the height of each variety before putting them in position. When they reach about two feet in height, two other stakes—the same length as the first—should be put in about one foot from the plant, the three forming a triangle.

Thinning and disbudding in the case of the Cactus, decorative and show varieties will cause some anxiety to the beginner. If quantity in preference to quality of blooms is required, it is usual to leave about six main stems; but if exhibition blooms are wanted, the main stems should be reduced to three or four. Shoots multiply very quickly and need taking out from their base. No plant should be allowed to become in the least degree crowded.

As the summer advances they will require a liberal amount of watering—on an average twice a week if the weather is hot and dry. Each plant

should be given not less than a gallon at each time. Dahlias are very gross feeders, and almost any animal manure is suitable. It may either be dissolved in a tank loosely or placed in a sack and allowed to escape gradually. The feeding with manure-water should always follow after the usual watering. Each plant should be given about one gallon. It is never necessary to feed as much in rainy as in dry weather.

As the blooms begin to open, a sharp look-out must be kept for earwigs and caterpillars. The best plan is to place a 2½-inch pot partly filled with greasy paper on the top of each stake. The pots should be examined every morning and the earwigs and other insects found in them destroyed. The best time to catch these pests is after dusk. The blooms should be carefully looked over with the aid of a lantern. The Pompon varieties do

not require thinning out, disbudding or feeding, and they do not grow so tall as the other varieties.

Dahlias should never be planted in a shady position or allowed to be crowded by other plants or shrubs.

The following is a first-rate dozen of both the Cactus and show sections: Cactus—Ajax, orange buff; Advance, scarlet terracotta; Débutante, peach pink, creamy centre; Dorothy, silvery pink; Dreadnought, dark crimson maroon; Glory of Wilts, pure yellow; H. H. Thomas, scarlet crimson; Mrs. Macmillan, pink, with white centre; Nellie Riding, crimson;

with white tips; Rev. T. W. Jamieson, coral pink, with creamy centre; Snowstorm, pure white; and William Marshall, bronzy yellow. Show—A. M. Burnie, orange, with yellow edge; Blush Gem, white, tipped with mauve; Countess, blush white, shaded rosy purple; Goldfinder, yellow, tipped with red; Harry Keith, rosy purple; J. T. West, yellow, tipped purple; Mrs. Gladstone, soft blush; Mrs. Langtry, cream, edged with crimson; Nugget, orange, tipped scarlet; Sulphurea, sulphur yellow; Tom Jones, creamy yellow, edged with rose; and William Rawlings, crimson purple.

WILLIAM BIGGS.

NEW TULIP VELVET KING.

This handsome variety gained the distinction of an award of merit when shown on the last day of April before the Royal Horticultural Society. It is a Darwin variety, and the large, globose flowers are of a dark glossy purple, suffused with a

bronzy hue. The flowers are borne on long, stout stems, and judging by its robust habit, the new-comer has the making of a useful garden variety. It was shown by Messrs. Barr and Sons, Covent Garden.

THE ROCK AND WATER GARDEN.

ANDROSACE CHUMBYI.

ACCORDING to the Kew Guide, this Androsace, or Rock Jasmine, is a hybrid between *A. sarmentosa* and *A. villosa*, though as I know it the flowers are a deeper colour than is usual in *A. sarmentosa*, while the foliage, though similar in shape, is smaller and neater. There seems to be some uncertainty among many gardeners with regard to the naming of these two plants, *A. sarmentosa* and *A. Chumbyi*. I notice in Meredith's "Rock Gardens" he speaks of *A. Chumbyi* as being a variety of *A. sarmentosa*, and then goes on to say that it is a stronger grower, deeper in colour, and the flowers are borne on shorter stems than in the case of *A. sarmentosa*.

As far as the last two characters are concerned, they agree with my experience; but the first point, viz., stronger growth, is with me the distinctive feature of *A. sarmentosa*, the summer rosettes of which usually measure $2\frac{1}{2}$ inches to 3 inches across, while the average diameter of my *Chumbyi* rosettes is 1 inch. However this may be, the plants I have under the name of *A. Chumbyi* (and I have every reason to believe them to be the correct thing) are most fascinating little things.

As in so many of the Androsaces, the leaves are arranged in rosettes and are very hairy, giving the plant a somewhat silvery appearance, and about May short stalks push up from the mature rosettes some 1 inch to $1\frac{1}{2}$ inches high, each bearing a truss of Primula-like flowers, pink in colour, the eye of which is usually yellow, though I notice in some of my flowers it is of a full dark red.

At this same time the plant produces somewhat Strawberry-like runners, and at the end of each is a new plant. Frequently a single rosette will give off five to eight of these. From the junction of the rosette with this cord or runner new roots are formed, and in this way the plant spreads into a larger patch, and, what seems to be most important of all, permits it to extend on to fresh ground.

With me the plants thrive in very gritty soil, those shown in the illustration on page 242, being in a compost which is about intermediate between the ordinary gritty alpine garden soil and the moraine, and consisting roughly of one

part of loam, leaf-mould, old sifted mortar and sand to each four parts of broken brick which has been passed through a half-inch sieve.

In this gritty medium, kept *amply* moist from early April till July, my little colony is extending very happily, the chief enemy being the damp, foggy days of autumn and winter, during which dirt and other by-products of the city's vapours descend upon the silky rosettes, and would in a short time poison them if precautions in the shape of a sheet of glass, supported some little distance above the clump, were not taken to intercept them. Such a glass sheet effectually achieves this result, and yet allows an ample current of air to



DEUTZIA LONGIFOLIA, A BEAUTIFUL NEW CHINESE SPECIES THAT IS HARDY IN THIS COUNTRY. (See page 244.)

pass over the downy foliage, so modifying the liability of the plants mildewing.

Woodford, Essex.

REGINALD A. MALBY.

SAXIFRAGA BATHONIENSIS.

THIS is one of many varieties of *Saxifraga decipiens*, but it is probably the finest of its kind yet raised. It is a rapid grower, and as an edging plant for a garden path it is likely to become as popular as Thrift or Sea Pink. It is of dwarf, compact habit, and in the springtime its glory is enhanced by a profusion of scarlet-crimson flowers. The individual flowers are much larger than those of similar varieties.

TREES AND SHRUBS.

SOME GOOD GARDEN CLEMATISES.

THE coloured illustration of Clematis Lady Northcliffe which forms the front cover of this week's issue directs attention to an important and popular group of hardy climbing plants, for when well grown there are few subjects which better repay the efforts of the cultivator than the various kinds of garden Clematis. Unfortunately, they are sometimes rather difficult to manage, for after making satisfactory growth for some months, or perhaps for a year or two, they collapse and die without any warning. Numerous theories have been brought forward to account for this peculiarity, the most practical one being that they suffer from overheating of the stems near the ground-line. There appears to be good reason for this idea, for plants which have the lower parts of the stems exposed to full sun suffer worse than those which have their roots shaded. The upper parts, however, enjoy sun; therefore it does not do to select a sunless position. Good loamy soil containing lime provides the best rooting medium, while a surface-dressing of well-rotted manure may be given occasionally with advantage. Two methods of propagation are adopted. Sometimes sections of the stems of good varieties are grafted upon roots of the common *C. Vitalba* and at other times cuttings are rooted during summer.

Numerous positions suitable for Clematises will suggest themselves to the owner of a garden. Planted against a pergola they give an excellent account of themselves; for covering summer-houses or trellises they are equally desirable; while for growing among Ivy on the walls of dwelling-houses they have much to commend them. A use to which they might be more often put, however, is to plant them about the bases of evergreen bushes, stunted trees or Ivy-covered trees, and allow them to ramble at will among the branches. Under such conditions they frequently make charming pictures. In some gar-

dens they are popular for growing in pots, their branches being trained over large wire balloons. Such plants have frequently excited the admiration of visitors at the various horticultural exhibitions held in the Temple Gardens. Pot plants of a less ambitious type find their way into our flower markets in spring. These are usually year old plants grown in 5-inch or 6-inch pots, bearing from six to twelve flowers each. They are very useful for greenhouse decoration, and may be planted out afterwards.

The garden Clematises are divided into several well-marked groups, which succeed each other in flowering. They commence in May and June

with the patens and florida sections; then come the lanuginosa varieties, followed by the various kinds which compose the coccinea, Viticella and Jackmanii groups.

C. patens is a native of China and Japan, whence it was introduced about 1836. Growing 10 feet or 12 feet high, it bears three-parted leaves and large mauve-coloured flowers, which have the segments rather widely separated. The various varieties differ in colour to some considerable extent. A good selection is as follows: Edith Jackman, white, flushed mauve; Fair Rosamond, white, flushed with rose; Lady Londesborough, silver, with reddish bars; Mlle. Torriana, rose, flushed purple; Mrs. George Jackman, white, with brown stamens; and Sir Garnet Wolseley, blue, with reddish purple bar.

C. florida, a Japanese species, has been known in English gardens for nearly a century and a-half. This and its varieties may be distinguished from the foregoing by the more formal-shaped flowers, with their segments touching or overlapping each other. There are both single and double flowered varieties, of which a selection is appended: Belle of Woking, silver grey, double; Countess of Lovelace, pale blue, double; Duchess of Edinburgh, white, double; and Proteus, purple. Neither of these two groups of varieties requires much pruning, any little which may be required being left until after the flowers are over.

C. lanuginosa is a Chinese plant of vigorous habit bearing very large flowers during July and August. Good ones are Blue Gem, violet blue; Beauty of Worcester, bluish violet; Fairy Queen, flesh, with pink bars; Gloire de St. Julien, lavender, very large; Henryi, creamy white; Lady Caroline Neville, lavender, with purple bands; La France, violet purple; Lord Neville, bluish; Lady Northcliffe, blue; Marcel Moser, lavender, with carmine violet bands; and Robert Hanbury, violet, tinged blush.

C. Viticella.—This is a very floriferous species, native of Europe. The deep purple flowers are smaller than those of other kinds. Ascotensis has violet flowers; La Nancienne, double violet; alba, white; rubra and grandiflora, red.

C. Jackmanii originated as a hybrid between *C. lanuginosa* and *C. Viticella*. It is very floriferous, blooms during autumn and bears purple flowers. There are, however, forms with red and white blossoms. The following are good ones: Gipsy Queen, violet purple; Jackmanii superba, deep purple; J. alba, white; J. rubra, red; Mme. Baron Veillard, lilac rose; Mme. Edouard André, red; Alexandra, violet; magnifica, reddish purple; Othello, purple; Snow White, white; and Ville de Lyon, red.

C. coccinea.—From this herbaceous scarlet-flowered species crossed with garden varieties

several curious and showy hybrids have been raised. Countess of Onslow, violet purple; Duchess of Albany, pink; Duchess of York, pink; Grace Darling, blush pink; and Sir Trevor Lawrence, crimson, are all good. D.

A NEW CHINESE SHRUB.

(*DEUTZIA LONGIFOLIA*.)

As stated in our issue for last week, page 235, this delightful novelty must presently be demanded in its thousands. The great charm of the species is the pink colouring of the flowers, which appear in axillary clusters on every twig and branch, large or small, a feature that is made quite clear



A BEAUTIFUL NEW DARWIN TULIP, VELVET KING. (See page 242.)

in the illustration on page 243. It was introduced from China by that assiduous collector, Mr. E. H. Wilson, and as a free-flowering hardy shrub it is likely to become immensely popular.

THE KITCHEN GARDEN.

WINTER AND SPRING BORECOLES.

DURING the past few weeks in many parts of the country there has been a great scarcity of good Borecole, and under this heading may be classed the Scotch and Curled Kales, the Sprouting or Hybrid and the older forms of Cottagers' and

Asparagus Kales. For an early supply my note does not apply, as the seed should have been sown before this, but for a late supply I would advise May sowings; indeed, in the South I have sown early in June, and by so doing secured a dwarfer plant and a later supply, as with good culture the plants grow rapidly and give a good return. In the North earlier sowings are made, but in this respect so much depends upon soil and situation. I prefer to plant out the seedlings much smaller than is often done, thus getting a dwarfer plant than when left to become drawn in the seed-beds.

The Kales, as regards soil and situation, are by no means fastidious. They will grow well in any position, and well repay deep culture. As regards the varieties, which are now somewhat numerous, they are all fairly hardy. For instance, take the variegated Kale, nice in appearance with its highly ornamental leafage with so many varied colours, but of less value as a good late vegetable than the green type. The Arctic Kales are deep green in colour and beautifully curled, also of good quality, and they are not gross growers, being admirably adapted for gardens limited in size. The Drum-head Kales, a variety of somewhat recent introduction, are a most valuable addition to our hardy vegetables and delicious when cooked; indeed, in this respect they resemble the early spring Cabbage, have a solid Cabbage-like head, and are remarkably hardy. Another type less known are the Sprouting Kales or Hybrids. I should say even of these there are two distinct varieties—those that make an upright growth like a Brussels Sprout and have their stems studded with close, compact shoots, and others of a much looser build, with longer shoots, and somewhat earlier. The Hybrid Sprouts are splendid for late winter or spring supplies, but I find they are quite large enough for all purposes if sown in May. Sow very thinly to get a stronger plant, and plant out early on good land that has not previously borne a Brassica crop. Then there is the hardy Labrador Kale. This is superior and quite distinct from the older Buda. I think the new hybrids have quite eclipsed the older forms of Cottagers' Asparagus or Buda. They

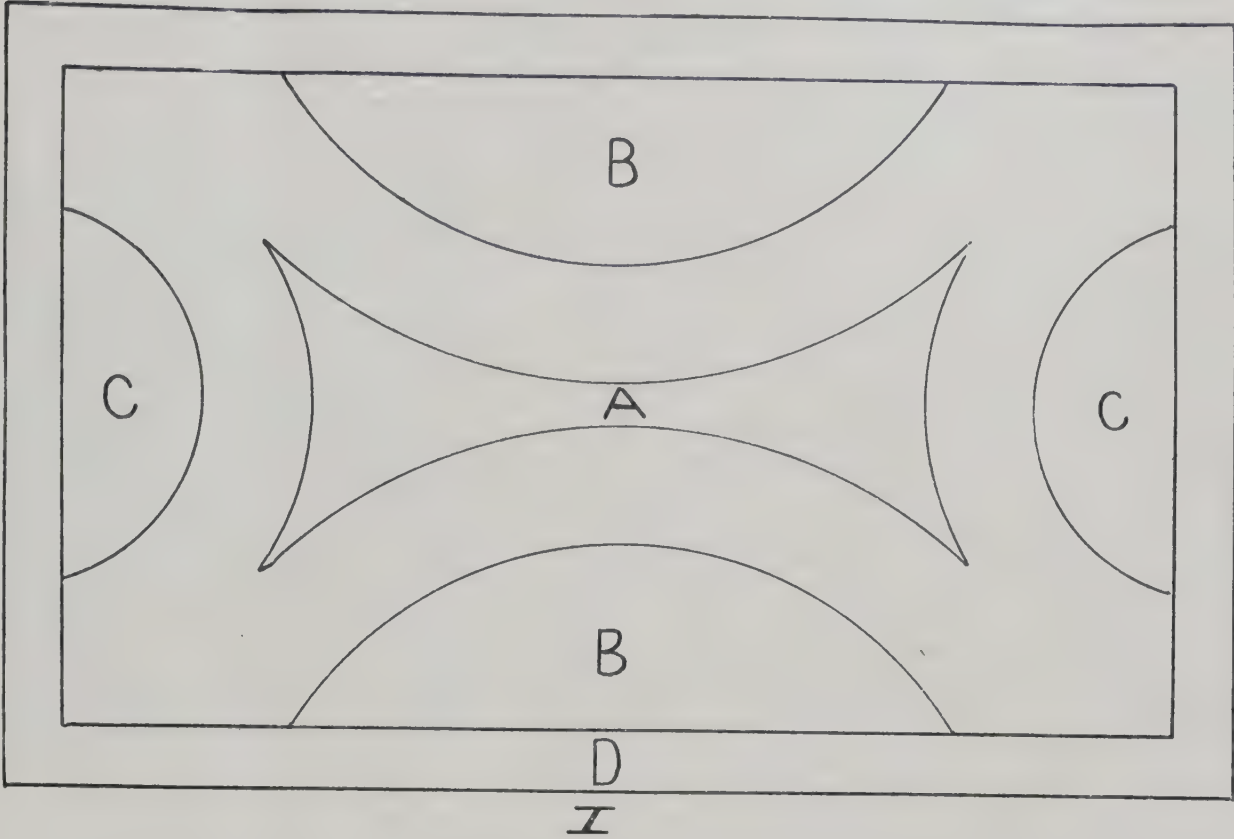
are more profitable, as they take less out of the soil and give a good return, the quality being superior; also, they are of great value for late supplies after the New Year and until May. A new Scotch Kale of great merit is the Victoria Kale; it is excellent for its keeping properties. The Dwarf Scotch, Extra Curled and Imperial Hearting are very fine late varieties.

A word as to culture, and this is very simple. Plant out early and give ample room, say, 2 feet between the rows at least for the hybrid forms and 12 inches between the plants in the row. For many years, to get a very late supply, I planted a portion on a north border. G. WYTHES.

GARDENING FOR BEGINNERS.

HOW TO BED OUT SUMMER-FLOWERING PLANTS.—II.

A LARGE, square-shaped bed may be effectively planted in a variety of ways. Of course, only one design is given in the accompanying plan, but I will mention others very briefly. The whole of the body of the bed may be filled with tuberous Begonias and edged with Violas, or it may contain one variety of a Zonal Pelargonium and have an edging of blue Lobelia. Heliotrope, with dot plants of Fuchsias, would look charming, the edging consisting of white Lobelia or white Violas. Salvias, with dot plants of Liliums and blue Violas, Ageratum or blue Lobelia, would also look effective.



AN OBLONG BED TO BE FILLED WITH BEDDING PLANTS OR ANNUALS.

Fig. 1 as drawn. The centre, A, white Marguerites; the whole space surrounding A, yellow Calceolarias; BB, Zonal Pelargonium King of Denmark; CC, white or cream-coloured tuberous Begonias; D, Zonal Pelargonium Golden Harry Hieover.

The Same Bed Filled with Annuals.—The centre, A, annual Chrysanthemums; the whole space surrounding the centre, A, Phlox Drummondii; BB, Zinnias; CC, Nasturtiums King of Tom Thumbs (scarlet); D, Mignonette or Portulaca grandiflora; the latter would make a border of mixed colours.

Fig. 2: A, Fuchsia Lord Roberts; B, pink-flowered Zonal Pelargoniums; C, an edging of Ageratum.

The Same Bed Filled with Annuals.—A, Calliopsis atrosanguinea, scarlet flowers; B,

Mignonette; C, an edging of Nasturtium minus coccineum, rich scarlet crimson.

Fig. 3: A, single-flowered Petunias, mixed; B, brown Calceolarias; C, an edging of Geranium Little Dandy. A dot plant of Kochia in the centre of A would look charming.

The Same Bed Filled with Annuals.—A, Stocks, mixed; B, Asters, mixed; C, an edging of Mignonette.

An Alternative Scheme.—A, Godetia Duchess of Albany, white; B, Godetia Lady Albemarle, crimson; C, an edging of Nemophila insignis, blue.

Distance Apart to Plant.—Marguerites, 18 inches to 22 inches; Fuchsias, according to the size of the plants, so that when at their best they will not be overcrowded. Dot plants used, if 2 feet high, must not be closer than 3 feet 6 inches.

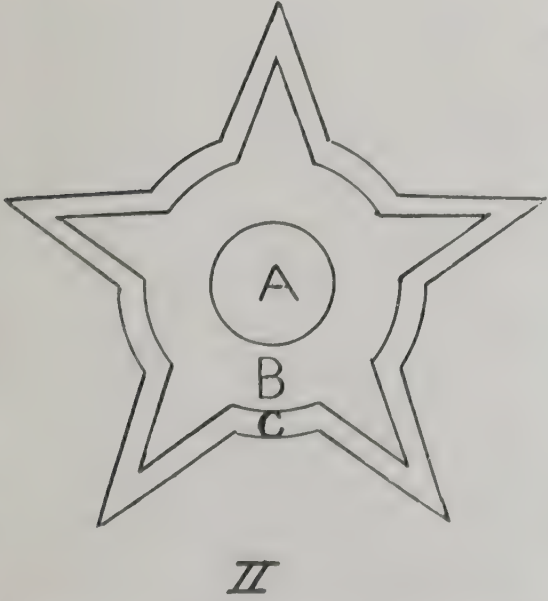
Soil and Manure.—Some lighter material must be put in for Fuchsias if the original soil be clayey. Marguerites and Petunias must not be planted in very rich soil. Nasturtiums require to be grown in poor ground; then the plants make moderate growth and flower well. Overcrowding is a common error in bedding, it being a mistake to grow six plants where one will suffice. G. G.

wise to plant the Sunflowers, as they would rob the shrubs of too much moisture. In no case must the Dahlias and Sunflowers be planted close together, but many feet apart, dotted about here and there; then they would show to more advantage also. The Dahlias especially should be liberally top-dressed with rotten manure. The single-flowered and the Cactus-flowered Dahlias are the best to plant, but the show varieties and the Pompons are also suitable, especially the latter. All the plants must be first hardened, through exposure to the air in a sheltered position in the garden or a yard, from the second week in May to the end of the month, when they should be planted out, watered and staked. B.

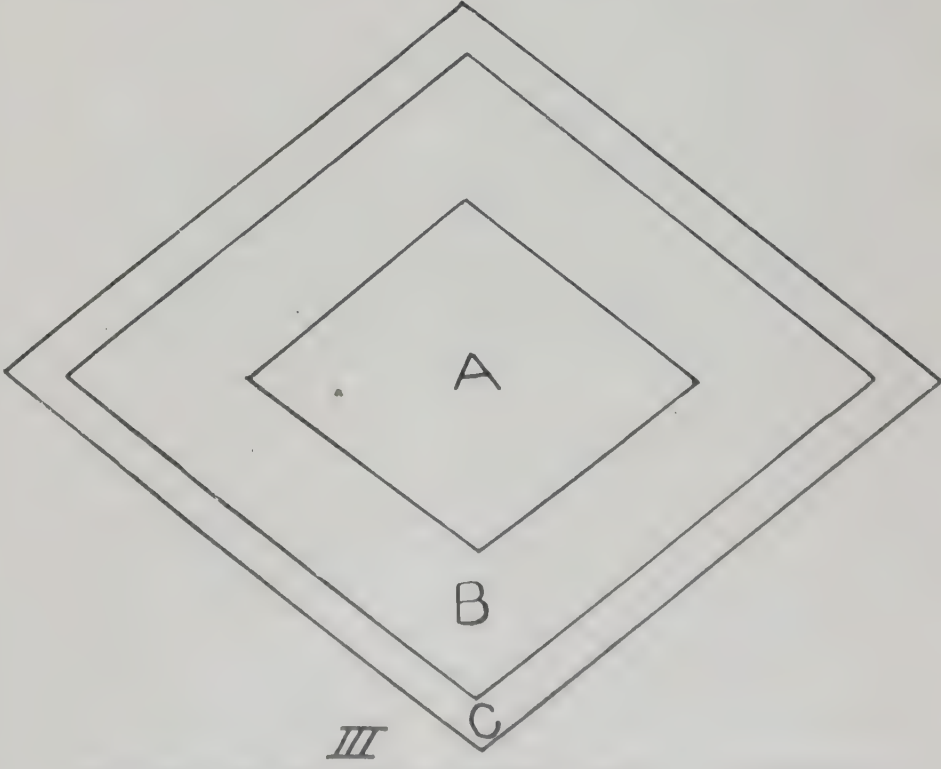
SUNFLOWERS AND DAHLIAS IN SHRUBBERIES.

ALTHOUGH it is advisable to plant temporary shrubs so as to give to the borders a furnished appearance from the beginning, it is unwise to overcrowd them. In due time, of course, the temporary shrubs must be removed, a few at a time, until only the permanent specimens are left, when these will need the whole of the space. In the meantime the new shrubberies may be made very attractive by planting Dahlias and Sunflowers in a judicious way, so as to fill up without in the least interfering with the shrubs themselves. In very dry

soils it would not be



A STAR-SHAPED BED IS MUCH FAVOURED BY SUBURBAN GARDENERS.



A DIAMOND-SHAPED BED IS OFTEN USEFUL IN AWKWARD SHAPED GRASS PLOTS.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Callas.—Now that flowering has ceased, stand the plants out of doors in a sheltered position to ripen and rest.

Hybrid Winter-Flowering Begonias.—As the young growths become large enough on the old plants, insert them in small pots in a sandy mixture of loam, leaf-mould and peat, and plunge in the propagating-pit until rooted.

Auriculas of the show and alpine varieties, after the flowers are past, should receive their annual potting. Use thoroughly cleaned, well-drained pots and a compost of good fibrous loam, with a little flaked leaf-mould, some cow or sheep manure, and finely-broken brick and coarse sand. If it is desired to increase the stock, all offsets should be detached and potted up. During the summer months give them a position shaded from the sun, but where all the light and air possible can reach them.

The Kitchen Garden.

Thinning the Crops.—This must be done before the young plants get too large. At the earliest thinning the straggling seedlings should be removed. With Carrots, if not too severely done at the first, the young roots at the second thinning will be useful for kitchen purposes. Onions, where size is not important, are best not thinned, excepting just a few pulled for use. They then ripen much better. Keep the Dutch hoe working between the rows.

Mustard and Cress.—For keeping up a supply during the warm weather, select a very shady part of the garden. Make the surface as fine as possible, sow thickly, make firm and water in with a fine-rosed can. Cover the seed-bed over with a board or anything to exclude light until well germinated. Sow little and often.

Potatoes.—As these appear above the ground, keep drawing soil around them for protection, as there is yet time for late frosts. Keep the hoe at work between the rows.

Peas.—Sow more Marrowfat varieties for succession, preferably in trenches, as then better facilities are afforded for supplying copious waterings in dry weather.

Turnips.—Make another good sowing of one of the white varieties.

The Flower Garden.

Antirrhinums.—These must be well hardened off before planting out in the course of a week or two. For bedding arrangements they are admirably suited, coming true from seed, and are also to be obtained in varying heights for different purposes and positions. The giant, intermediate and dwarf are each alike excellent, the latter especially useful for ribbon borders.

Agaves.—These should be well sponged and syringed before being placed out of doors. The same applies to Bays and Myrtles.

Window-Boxes.—Have these thoroughly repaired and cleaned, so that everything is in order for the plants when the time for planting arrives.

Border Chrysanthemums.—Plant out now in well-prepared ground. Either a mixed border or a break may be planted, putting the plants out in rows, and where many cut flowers are in request, this is to be recommended. The early-flowering varieties should always be selected, as the late ones, in the event of wet, cold weather, are not to be relied upon. The varieties are numerous, but a few of the best are Kitty Riches, Harvest Home, Roi des Blancs, Goacher's Crimson, Polly, Mme. Desgranges and its sports.

Pentstemons.—These can be planted out now with safety. A slight frost will not harm the plants, if such occurs, providing they have been hardened off.

The Hardy Fruit Garden.

Strawberries.—The beds will now require a good layer of straw to be placed round the plants. See that this is well worked round them, so that the flower-spikes are kept clean. Any runners that may be appearing, if not wanted for propagating, should be cut off.

Gooseberries.—Keep a sharp look-out for the Gooseberry caterpillar. If allowed to go on unchecked, the bushes will soon be completely defoliated. For a remedy dust with Hellebore powder, or syringe in the evening with a good insecticide. Red spider is another great enemy. Vigorous syringings and waterings at the roots in dry weather and the use of an insecticide will do much to mitigate the attacks. The mildew now so prevalent in some parts should be notified to the Board of Agriculture if there is any suspicion of its presence.

Fruits Under Glass.

Early Melons.—The earliest fruits will now be ripening, and to get the best flavour the finishing of the fruits should be assisted with a free circulation of air, drier conditions and a little fire-heat in the pipes through the night. Before going to table the flavour will be improved by the fruits being placed upon a sunny shelf.

Successional Plants.—As the fruits commence to swell and the crop is selected, support the fruits either with nets or flat, square pieces of board with a string passed through each corner. Keep a warm temperature, but air freely in the morning when the weather allows, closing early and taking advantage of the sun's rays. Water at intervals with liquid manure, properly diluted, while for a change a sprinkling of a quick-acting patent manure can be well watered in. If the stems show any signs of canker, dress the affected parts with lime. When watering, avoid wetting the stems of the plants near to the soil. While the fruit is swelling, syringe twice daily and keep the laterals removed before they get too strong.

Damping.—To keep the foliage of the occupants in houses in a healthy condition, this plays an important part. The floors, walls, borders, and especially under the pipes, should be damped at least twice daily. At this season warm houses benefit by having the floors at least damped each evening, and an occasional sprinkling of manure-water does much to quell attacks of spider.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Strawberries.—These will now come on very well in cold frames, but it is not the best practice when ventilating to do so from the upper and under parts alternately. It should be done only from the upper part, which prevents draughts and their concomitant mildew.

Cucumbers.—Plants should be prepared for planting in pits, in which they succeed during the summer months without fire-heat, provided all the sun-heat possible is caught and moisture not unduly applied. They may be planted either in large flower-pots or, preferably, in wooden trays not more than a foot deep.

Tomatoes.—These do splendidly when planted out in unheated structures. They will need hardly any ventilation for several weeks, and if the soil is in the right condition, no water need be applied till the first fruits are set. They should not be planted closer than 3 feet, and be grown on single stems, to be stopped beyond the third truss. If more is left, the fruit has not time to mature.

Late Peaches.—It will not be necessary from this date ever to close the houses, that is, if the crop is wanted to be as late as possible in ripening. The trees ought to be thoroughly washed twice daily as a precaution against red spider. It sometimes happens that trees in robust health produce fine-looking, strong shoots near the central parts. These, as a rule, are worthless, and if not wanted to fill bare spaces should be forced off. If wanted, pinch them near the base in order to cause one or more less strong but valuable shoots to break.

The Vegetable Garden.

Leeks.—Frame-raised Leeks are now large enough to plant out in narrow trenches. They will need protecting for a few weeks till established.

Curled Kale.—In the course of the next few days a full sowing of this valuable vegetable should be made. Strains vary considerably in hardiness, those

that are dark green being usually the hardier. Though many people sow much earlier, it is not essential, and when sown at this time the young plants come in right to follow Potatoes and other crops.

Endive.—If Endive is wanted in early autumn, a few seeds of a curled variety, which is to be preferred to the broad-leaved, may also be sown at the same time; but it is too soon to sow for the main winter and spring crops. Endive, unlike Lettuce, does best in rather firm soil, and should be transplanted when the seedlings are still small.

Rampion.—This, too, ought to be sown, very few, if any, plants running to flower when sown so late, and there is plenty of time for the roots to grow. The minute seeds should scarcely be covered. A deep enough depression for the seeds is produced by pressing a garden line into the smooth soil, and drawing the back of a spade over the surface serves to cover the seeds sufficiently.

The Flower Garden.

Bulbs.—Those in beds to be shortly occupied with summer-flowering plants should be lifted and laid in in the reserve garden to finish growth.

The Bog Garden.—A constant supply of water must now be provided for bog plants, which are growing very rapidly. Some plants, e.g., Forget-me-not, Sagittaria and Bogbean, grow so rank that unless they are curtailed at the beginning of the season, the less pushful plants are crushed out of existence. Others, such as Primula japonica, produce so many seedlings that it is necessary to treat them almost like weeds.

The Wild Garden.—Sweet Cicely (Myrrhis odorata), Polygonatum, Holy Thistles, Bocconias and others are now furnishing this special garden. It is to be noted that it may be too wild, and, as in the bog garden, a judicious thinning out of those which would otherwise encroach on their neighbours must be made from time to time. Nor should common weeds be permitted to obtain a footing.

Climbers.—These quickly get entangled if left to Nature, while if occasionally attended to so that the shoots are made to take the proper direction and superfluous ones removed, the general condition of the plants is improved. Many of the wichuraiana Rose varieties produce far too many shoots from the base, and now that it is possible to pick out the best, the others may be broken off before they become set. Banksian Roses are showing an abundant bloom, but these are not so profuse in pushing new shoots, and therefore all that do push should be preserved and duly trained.

Rosa hemisphaerica.—This very old but beautiful species has obtained a dubious reputation, on account of its obstinate refusal to carry flowers. Here it flowers profusely, and at the present time the long shoots have to be denuded of a large number of buds to strengthen those that are left to expand. Its other requirements consist in cutting out the flowered-out shoots and thinning the weaker of those of the current year's production.

The Plant-Houses.

Ficus repens is a capital plant for covering walls of stoves, but it must be trimmed frequently to keep it neat. There is a small-growing variety of this.

Deutzias.—The value of the common D. gracilis for greenhouse decoration has long been recognised, and it can now be supplemented with many distinct and pretty forms, such as D. Lemoinei compacta, D. gracilis venusta, D. Vilmorena and D. Boule Rose. They vary considerably in habit, but all are useful. Long shoots can only be produced by hard pruning after flowering.

Pelargoniums.—The earliest of these showy plants are now coming into bloom, and it would be advisable to subject them to a mild fumigation before the flowers open. Given a sufficient supply of water at the root with manure, aphids will not be troublesome. Propagation may successfully be carried out now with flowerless shoots, which root freely, one cutting in a 2½-inch pot. They require a little higher temperature than that of a greenhouse, and very little water till roots are produced. These grow into very nice plants for flowering the following year.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

BOOKS.

Turner's Water-Colours at Farnley Hall.—

Those of our readers who appreciate good pictures will be familiar with the many beautiful oil-paintings by Turner that are to be found in the National Gallery and the Turner Gallery at the Tate Gallery; but his water-colours, of which there are a considerable number in existence, are not nearly so well known, mainly because the



A TERRACE GARDEN IN THE MAKING BY MESSRS. WALLACE AND CO. AT THE FORTHCOMING INTERNATIONAL EXHIBITION. IT COM-
PRISES AN OLD ENGLISH GARDEN, LILY POND AND A CASCADE.

best are in private collections. At Farnley Hall there are nearly two hundred water-colours by this famous artist, and the present owner, Mr. F. H. Fawkes, has kindly placed these at the disposal of the editor of the *Studio* for reproduction. Thirty pictures in all are to be published, in five parts, each part to cost 2s. 6d. In Part I., which we have before us, we find Bonneville, Savoy, an exquisite piece of mountain scenery; The Valley of the Wharfe from Caley Park; The Valley of Chamounix; Scarborough Town and Castle: Morning; Boys Collecting Crabs; and Interior of St. Peter's, Rome. These reproductions are exceptionally good. Each plate measures about ten inches by seven and a-half inches, and the sunk mounts 16 inches by 14 inches. The respective parts are to be published by the *Studio*, 44, Leicester Square, London, W.C.

The Gardener and the Cook.*—The authoress of this book has conveyed much very useful information in a most charming style. Every item of information is, as it were, served to the reader, with a few words of complement. There is no serious attempt made to give cultural hints on the different vegetables and herbs dealt with in the book; but some references to the vegetable and fruit garden are very instructive. For example, the authoress says, referring to the cultivation of Mushrooms, "Our Mushroom-bed is made up in a shed that covers a north wall, and is on a slope. It is a dry, well-built shed, and is only used for storage of roots. The bed itself is made of horse-droppings intermixed with loam. . . . It is watered with a fine rose and rain-water, frequently enough to keep it moist; for do not the ordinary field Mushrooms come best in a damp season? They will not flourish in a dry soil, or when they are cold, and it is of no use attempting to make them do so. . . ." The chapter on salads is very interesting and instructive; but

here, again, it is not of their culture, but of their preparation in the kitchen that the information refers to. Herbs and their uses are ably dealt with; and the chapter about recipes and the use of butter should be well studied by the cook. The authoress speaks of Lettuces, Cos or Cabbage, cooked, and says, "One of the nicest dishes we can have in summer is that of Lettuces stewed in broth and served hot with a garnish of Green Peas or young Beans. After being washed and cut

into half, the Lettuces are thrown into boiling water with salt to blanch them, then lifted out and drained. . . ."

The whole process is simple and interesting, and the reader will find that the foregoing quotations from the book are a sample of many paragraphs written in an equally delightful style. The distinction between plainly-cooked and plainly-dressed vegetables, with the *raison d'être* of sauces and dressings; of tender greens, of Gourds, Marrows and their kind; of Celery, Artichokes and Potatoes; the treatment of Beans and dried vegetables; of Corn, Rice and Italian pastes; fruit for the table, the store-room and closet; preserves, jellies, bottled fruits,

pickles, wines and cordials, are all dealt with. The black-and-white illustrations add interest to the book, which should be read by all housewives and others responsible for the preparation of vegetables and fruits for the table.

Oxford Gardens.*—All students of history and our ancient monuments owe a debt of gratitude to the author of "Oxford Gardens" for the excellent account he has furnished of the famous old Physick Garden and the other various College gardens of Oxford. England's oldest existing botanic garden was founded as long ago as 1621, which the author points out upon what appears indisputable evidence is a decade earlier than most writers fix its foundation. To thoroughly appreciate the part played by this classical institution in early botanical science in this country, one needs to carry his mind back in review of the period about which it came into existence and note the wonderful impetus that science received during this century, when, having emerged from the devastating effects of the Civil Wars, its learned men settled down to the pursuit of those subjects whose victories are more glorious than its wars. It was during this period that we get the foundation of the Royal Society by Bishop Wilkins, also at Oxford. Hooke was at work improving the microscope; Boyle, the air-pump. John Ray raised zoology to the rank of a

* "Oxford Gardens," based upon Daubeny's Popular Guide to the Physick Garden of Oxford: With notes on the gardens of the Colleges and on the University Park, by R. T. Günther, M.A., Fellow of Magdalen College, Oxford. Price 6s. net. Oxford: Parker and Son. London: Simpkin, Marshall and Co.

science, while his "History of Plants," coupled with the work of Robert Morison, the first Professor of Botany at Oxford, may be said to be the foundation of modern botany. To Nehemiah Grew and Malpighi, who divided the honours, may be ascribed the foundation of the study of vegetable anatomy.

The historical part of the book is very fascinating, and gives interesting details about its famous professors, many of whom have left their mark on botanical science, as will be realised when, besides Morison, already mentioned, names are recalled such as Sherard, the founder of the Chair of Botany; Jacob Bobart, the younger; Dillenius, the author of the classical work, "Hortus Elthamensis"; Sibthorp, father and son; Daubeny, the beloved of his students; Bayley-Balfour, who now presides with such distinction over the Edinburgh Garden; and the present holder of the professorship, Dr. S. H. Vines.

The work is well planned, and has chapters on the trees, shrubs and wall plants, which contain interesting details of famous trees; and on hardy herbaceous plants, which describe the various arrangements which have existed in the garden and the plan adopted at the present time, with a description of the various Natural Orders, which students to-day must find of great value. Hardy aquatics, for which Oxford has been famous from the time of the elder Bobart to our own day, are also dealt with. The transition of the greenhouses is also described from the very earliest time, when the greenhouse was nothing more than a dignified barn with massive walls, which were, no doubt, useful in absorbing the sun's rays during the day and radiating them out during the night. A very crude method used in heating the greenhouse during frosty weather is shown in a figure of a four-wheeled open iron waggon, which was filled with burning charcoal and drawn through the house by the gardener. What a contrast to the present light modern structures with their efficient methods of heating!

The contents of each of the present greenhouses are well described, and mention made of the various



MESSRS. PULHAM AND SON'S ROCK AND WATER GARDEN IN THE MAKING AT CHELSEA. THIS DESIGN EMBRACES A SERIES OF WATERFALLS AND A MORaine GARDEN.

economic and other uses of the plants. Special mention may be made of the Water Lily House, the occupants of which and their cultivation by the present curator have brought great credit to the garden. How thorough is the work of the author may be seen by the inclusion of chapters on the weeds and wild plants, the botanical museum, library and laboratories, which detail

* "The Gardener and the Cook," by Lucy H. Yates; price 3s. 6d. Constable and Co., Limited, London. 1912.

the origin and varying fortunes of each. Lists of plants growing on the various walls are given, which makes the work a useful guide-book. There are a few misspellings of plant names, which will, no doubt, be altered in future editions. The last part of the work chiefly deals with the trees in College gardens, and contains an excellent index, which facilitates ready reference.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

VIOLET SPOT DISEASE (B. A. I.).—Various causes produce spotting of Violet leaves; but if, as seems possible from the symptoms you describe, the spotting is due to a fungus, probably the best treatment (always provided a sufficient circulation of air is provided for) is to spray the plants, say, once a week, with a solution of 1oz. of potassium sulphide in three gallons of water.

SUMMER BEDDING (M. T.).—The only yellow-flowered plants we recall suitable for association with the Salvias as bedding plants are tuberous Begonias of that shade. You might, of course, have raised yellow-flowered Antirrhinums by special culture, and these latter, indeed, would be the more suitable. Such colour combinations as these require to be prepared a long time in advance, and to be worked up to accordingly. At this date the Antirrhinums may not be obtainable; hence the Begonias, a profuse-flowering race, would be the best.

VIOLETS (E. W.).—If you require a single-flowered variety of the largest size, you cannot do better than purchase Princess of Wales or La France, either of which is good, the last-named having the largest as well as the darkest-coloured flowers. If, on the other hand, a flower of smaller size would suit, we should recommend Welliana as a good variety, free and very profuse as well as fragrant. Luxonne is also good. Comte de Brazza (white) and Countess of Caledon (lavender blue) are the best of the doubles. The class of plant you require is a well-rooted layer or runner as the season is advancing. On no account be tempted to plant old divided stock, as such material is rarely satisfactory. The ground should be deeply cultivated and rich without undue grossness. The planting should be firmly done and the plants kept from weeds and insect pests, red spider being the worst throughout the growing season.

PÆONIES (W. D.).—If the plants were clumps, whether of small or large size, and you planted them intact, you did wrong, and you are reaping as you have sown. The Pæony is not a plant to be trifled with. It has a way of its own, and cultivators must, to use a slang phrase, "cotton to it" if they would succeed. The fairly good flowering you had last year was due to the elaborated sap and bud development of a previous year—the thicket of weakened shoots, to which you refer, the outcome of a cultural error you have not confided to us. You can do no good by diminishing the number of these weakened shoots, and it may take years and drastic measures meanwhile before the plants recover. Cannot you give us some further particulars? If so, we may advise you in more definite terms. In any case, let the plants severely alone. The Pæony is very impatient of interference at any time, and, when disturbed, certain methods should be adopted if success is to be assured.

POLYANTHUSES FAILING (E. E. F.).—The fault is with the soil, which was teeming with millipedes and much other insect-life of a microscopic nature. Slugs, too, and that most voracious of all, the black slug, were noted. The roots of the plants were quite destroyed. Treat the soil generously with lime, or give a dressing at once and fork it in of any of the advertised soil fumigants. In other ways avoid planting the same crop in the same place each year, remembering that a change of soil to the plant is as clean linen or change of air to human beings. Finally, in so far as the Polyanthus is concerned, raise seedlings

each year, and so always endow your plants with the vigour and freshness of youth.

PÆONY BUDS AND ANTS (Hal.).—The exterior of the buds of most varieties of Pæonies are of a viscid nature, and in all probability the ants find something in it to suit their tastes. It may also be that insect-life in some form is present, and that this constitutes the greater attraction. We have grown Pæonies largely, however, but have never experienced disaster from this particular pest. Ants may be kept at bay by the use of carbolic acid in water about the plants, and by dusting the soil with some of the soil fumigants now advertised. Place a little Vaporite in the runs of the ants, or sown thinly over the soil it has a deterring effect. In all probability your Pæonies have suffered not from the attacks of ants, but either from frost or the prevalence in some seasons of a fungus which attacks the stems a little below the flower-buds. As you give us no definite information respecting the damage, we can form no opinion thereon.

TREES AND SHRUBS.

PLANTING CAMELLIAS (F. M. S.).—Camellia trees may be obtained from Messrs. William Paul (Waltham Cross), Limited, The Royal Nurseries, Waltham Cross, Herts. The present is a good time to plant them, especially if they are obtained in pots. Before planting, be careful to prepare the ground well by trenching, and if heavy, by adding lighter soil. Whether the soil is heavy or light, the trees will appreciate a little peat placed about the roots at planting-time.

PRUNING A RHODODENDRON (A. E. P.).—The present is the best time to cut a Rhododendron hard back. You may prune the branches back into old wood, for, as your plant is growing in a pot, you can place it in a warm and moist house to encourage new growth. After cutting back, keep the branches well syringed several times a day. This will encourage dormant buds to break into growth. Do not disturb the roots of the plant at the present time. Should any repotting be necessary, leave it until the new shoots are 1 inch or 2 inches long.

TREES AND BRACKEN (A. M.).—The following kinds of trees would be suitable for your purpose: Sycamore, common Elm, common Oak and Beech. Early spring, February or March is a good time to undertake the transplanting of Bracken. You must, however, be prepared for disappointing results, for although Bracken makes itself a pest in many places, and rapidly covers the ground where it is not wanted, it is sometimes most difficult to establish it elsewhere. The best plan is to obtain large turves containing Bracken rhizomes, and plant them bodily in the place where the effect is desired. The most satisfactory time to transplant Oriental Poppies is autumn, winter and early spring. They would not be likely to do any good if moved now. You cannot do better than plant the following subjects against your wall with a northern aspect: Cratægus Pyracantha, Ampelopsis Veitchii, Jasminum nudiflorum and Celastrus articulatus. Ivies of various kinds are, of course, the most satisfactory plants for north walls; but those you object to.

FRUIT GARDEN.

INJURY TO GOOSEBERRY BUSHES (W. J. C.).—There is no disease of Gooseberries likely to produce the result of which you speak. If birds are the culprits, you will find the bud scales, as a rule, still left on the branches, while all the soft parts of the bud have been destroyed. It is probable that birds have been at work. Black cotton, threaded over the bushes during the winter, is often a good preventive of damage of this kind, and delaying the pruning until February is also a good measure. Liming the bushes may also be carried out with advantage.

PEACH TREES DROPPING FLOWER-BUDS (L. H. R.).—Seeing that you have been successful in the growth of your trees in pots for some years, it is not easy to give a reason why they have failed this year, without seeing the trees and knowing something of the local conditions under which they are grown. There have been many complaints this spring of Peach and other fruit trees in pots, as well as pot-forced Strawberries, and even Grapes in established borders, proving to be in a poor and unsatisfactory condition in consequence of the great heat and long-continued drought of last year having exhausted and weakened the trees. We suggest that this may be the cause of the failure also in your trees. If so, it may prove not to be an unmixed evil, as during the rest from carrying fruit the trees will have will, no doubt, greatly benefit them for next year's fruiting.

PEACH BLOOM DROPPING (Tudor).—The cause will very likely be found in keeping the plants too warm in winter. Trees at this time should be kept as cool as possible. One seldom or ever finds the blossom fall from trees grown on walls in the open air. Possibly the roots have also been too dry at one time or another. Dryness at the root is fatal to the well-doing of a Peach tree; or it may be that your soil is deficient in lime, or perhaps the drainage is at fault. (2) The most common cause of late Pears shrivelling is because they are gathered too soon. Keeping them in too warm and dry a place will have the same effect. (3) The Cherry you mention would succeed very well in the position. It would be better to plant two fan-trained trees, one on each side of the window, rather than cordon trees, as the Cherry succeeds best when permitted to grow without too much restriction. *Re Pear blossom.*—Yours must be a fine sight. We hope you escaped the destructive frost of Friday morning, April 12, 17° in some places, which completely destroyed Pear and Plum tree blossom.

KITCHEN GARDEN.

ASPARAGUS-BED GONE WRONG (Asparagus).—There are so many causes which may be accountable for the failure of Asparagus-beds that, in the absence of some particulars to guide us to a conclusion, it is difficult to give an answer which may prove useful. You say the position is low, and possibly the ground cold and not too well drained, and the soil perhaps heavy as well. These conditions, if present, are sufficient to account for the trouble. A frequent cause of failure is cutting the "grass" too hard and for too long a time. If this is persevered in for a few seasons, it will soon prove fatal to the Asparagus. You will know whether this has been the cause in your case. In cutting Asparagus the best way is to cut all the grass that comes, large and small, until June 20, when cutting must be stopped altogether for that season. The best thing you can do is to give the bed a dressing of bone-dust at the rate of a small handful to the square yard. Do not cut hard this summer, and not at all after the above date.

CUCUMBERS AND ARTIFICIAL MANURES (Scott).—As a top-dressing for Cucumbers planted out in beds in the ordinary way, for the purpose of encouraging roots, we know nothing better than the following: To one peck of good virgin loam, passed through a 1-inch meshed sieve, add a gallon of fresh horse-manure (passing this through a sieve in the same way), three-parts of a pint of bone-meal, and about the same of soot. Mix well together and place firmly over the bed half an inch deep, having previously taken off some of the old surface soil. Liquid manures.—The best results are obtained by occasionally varying these. One of the best is Peruvian Guano, dissolving half a pint in two gallons of water. Pearson's, Clay's and Thomson's manures are excellent for this purpose if carefully applied according to instructions as to quantities to use. Soot-water is excellent used in the same proportion as the guano, as also is the liquid from stable and cow yards when sufficiently diluted. Our experience in the use of liquid manures goes to show that they are generally used in too strong a solution, with a weakening instead of strengthening effect on the plants to which they are applied.

TO MAKE AN ASPARAGUS-BED (A. S.).—The Asparagus loves a deep, rather sandy or open loam to grow in, because such soil is always well drained and warm; but any soil can be made to grow Asparagus, provided the labour and expense of preparing the ground is not begrudged, and it should not be, as, once a bed is well formed and planted, it will remain in profit for a lifetime if well looked after. Cold, heavy, wet soil is the worst for this plant. We will take it for granted that your soil is ordinary, well-drained garden soil. An Asparagus-bed should be 4 feet wide, with a path or alley on either side each 2 feet wide. It will thus take a piece of ground 8 feet wide to form an Asparagus-bed; but if two beds are formed side by side, 6 feet more only is required for the next bed, as the one alley will answer for one side of each bed. Let the land be trenched 2½ feet deep (the alleys to be trenched as well, as the Asparagus plants will soon root into them). In trenching keep the poor soil to the bottom, and keep a wide trench open while trenching proceeds (at least 18 inches). Into every trench should be placed a liberal quantity of rich farmyard manure. The soil cannot very well be too rich as long as the manure is well mixed with the soil. There should be at least a full cartload to every rod of ground, including the alleys. Having finished the trenching, mark out your bed or beds, each 4 feet wide, and then lay the Asparagus roots on the surface of the soil (not planted in it). There should be three rows of plants to each bed—a centre row and one on each side of it, at 15 inches apart. There should be 10 inches between plant and plant in the row. Connover's Colossal is one of the best varieties. One year old seedlings are the best to plant. Keep the bed free of weeds during the summer, give it a light dressing of partly-rotted farmyard manure after the grass is dead, and clear it away in the autumn. Do not cut any young grass until the third year after planting.

MISCELLANEOUS.

CLIMBERS AND GARDEN SWING (F. H. R.).—You will find Crimson Rambler the best Rose to train on the poles you describe. The wichuraiana varieties would be less suitable on account of their rampant growth. Do you not think, however, that the spines of the Roses would be rather dangerous for children playing in the vicinity, especially during summer, when the plants were growing fast and the swing in regular use? To our mind Clematis Vitalba would be a more suitable subject for the position. It grows well almost anywhere, and will stand wind.

HELIOTROPE FOR INSPECTION (Five Years' Reader).—We can detect nothing radically wrong with the shoots of Heliotrope sent; but, judging from their drawn and attenuated appearance, they have evidently been grown of late in too high a temperature. A minimum of 50°, running up to 60° during the day, is very suitable for Heliotrope during the winter months. To get rid of ants, pour boiling water in every crevice where they take shelter; that is, when it can be done without injury to the roots of any plants. Next, they can be trapped by smearing pieces of sponge with treacle, and when these are covered with insects they may be dropped into boiling water. Bones are also effective as traps, and may be treated in the same way. For the destruction of beetles you may employ Beetlecut or phosphorus paste, or they may be trapped by putting a little beer or sugar and water into deep earthenware dishes, into which they will get, and are then unable to extricate themselves. Care must be taken to place a few pieces of wood leaning against the dish in order to allow the pests easy access. Keating's Powder, too, will stupefy the beetles, and it is not injurious to the roots of plants. In any case, perseverance is an important factor in getting rid of both of these pests.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

To Our Readers.—In this special issue, which is more than twice the ordinary size, will be found a comprehensive descriptive report of the great Royal International Horticultural Exhibition. In a show of this magnitude, where there are over one thousand competitive exhibits, as well as over a hundred non-competitive groups, it is obviously impossible to report it in the ordinary way, so we have adopted the plan of giving descriptive illustrated articles of each section. Next week we hope to publish particulars and illustrations of the new plants which receive awards or certificates. Those readers who have gardening friends abroad should post them a copy of this week's issue. We shall be pleased to welcome readers at our kiosk, which is in the central avenue of the exhibition grounds and opposite the administration offices.

Adenocarpus anagyrus.—This is a rare plant and a conspicuous evergreen, and the habit of growth and the manner in which the leaves clothe the growth arrest attention. It is a fast grower, attaining 6 feet to 8 feet in about three seasons. The flowers are a golden yellow. The plant can be easily raised from seed.

The Japanese Orange, Limonia trifoliata (Ægle sepiaria), is very striking and beautiful just now; it is covered with a mass of white flowers, which later on produce small Oranges. The branches are armed with long spines, and these give it a very conspicuous appearance when in bloom. It is not at all particular as to soil, growing in ordinary heavy soil or that of a light nature. It likes plenty of water, particularly in dry weather.

A Showy Japanese Crab Apple.—Should a showy bush or small tree be required for the shrubbery or lawn, no mistake can be made if the Japanese Pyrus floribunda is selected, for it is aptly named, as no tree blossoms more profusely or more regularly. Very often met with from 12 feet to 15 feet high, it forms a wide-spreading head upwards of twenty feet in diameter, with branches sweeping the ground in all directions. The rose-flushed flowers appear during late April and early May, and they are in such profusion as to almost hide the branches. A variety called atrosanguinea may be obtained. This is recognised by its rich red flowers, which are even more noticeable than those of the type. Where space is available, a pretty effect may be produced by forming a group of the two forms. Such a mass is to be seen at Kew occupying a mound, with a few taller-growing conifers, near the Water Lily House. In another part of the Gardens a clump of the same Pyrus, with groups of Pheasant's-eye Narcissus beneath, is also very attractive.

The Horticultural Club.—A special meeting of the club was held on Tuesday, May 14, to hear a lecture on the Canadian Rocky Mountains by Mrs. Henshaw. The attendance numbered upwards of fifty, including many ladies. Mrs. Henshaw took her hearers on many expeditions, and illustrated by beautiful language and scores of exquisite slides all the features of interest. It was a gathering of remarkable success, and all present were heartily grateful to the speaker for coming among them. The chair was occupied by the president of the club, Sir Frank Crisp.

A Beautiful Honeysuckle.—Lonicera alpigena belongs to the bush section of the genus, and is easily distinguished from other members of the same group by its upright habit, intensely hairy leaves and showy inflorescences. A native of the European Alps and the Himalaya, it forms a shapely bush 6 feet or 8 feet high and as far through, clothed with ovate or obovate leaves, which are densely covered on the under surface with soft, velvety hairs. They vary from 2 inches to 4½ inches long and from 1 inch to 2 inches in width. The flowers are borne in pairs from the leaf-axils, each two flowers being enclosed by a pair of large red bracts. The flowers are orange-coloured, tubular, half an inch to three-quarters of an inch long and hairy. The bracts are persistent after the fall of the flowers, and gradually take on a deeper colour, so that when the black fruits are ripe in August they are deep red. Growing freely almost anywhere, it is an excellent shrub to place in a mixed shrubbery, while there are many less ornamental subjects which occupy prominent positions as specimen plants.

Conferences at the Royal International Horticultural Exhibition.—Two important conferences will be held during the International Exhibition at Chelsea on subjects connected with horticulture. Both will be presided over by the Right Hon. A. H. Dyke Acland, chairman of the science and education committee, and will be held in the Recreation Hall of the Chelsea Royal Hospital. Admission is free, and all interested in the subjects are cordially invited to attend. Those attending the exhibition may enter the conference hall from the exhibition grounds (gaining re-admittance to the exhibition by the same means). Those not attending the exhibition may enter the conference room from the Royal Hospital entrance. The first conference will be on Thursday, the 23rd inst., at 2 p.m., the subject being "Horticultural Education." The second conference is arranged for Friday, the 24th inst., at 9.30 a.m., on "Legislation in Connection with Plant Diseases and Pests." Reports are being prepared by the science and education committee on the present condition of both horticultural education and legislation against plant pests, and will be printed with the papers and discussion.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Fritillaria Meleagris.—I was pleased to see the Snake's-head Lily figured in *THE GARDEN* for May 11, page 231, as growing; but I think it is not nearly enough known and appreciated as a cut flower for the house, where it shows to the greatest advantage. I frequently use it in this way, and find its quaint shape, colours and marking always attract attention and admiration. It makes a dainty table decoration in Venetian glass, which suits it best of all; but as this is not generally obtainable, the next best is, I think, bronze Bretby ware.—AN AMATEUR.

Cottage Tulip Grenadier.—Some years ago Messrs. Wallace and Co. of Colchester put a beautiful collection of new seedling garden Tulips on the market, of which I consider Beau Brummel, Marksman and The President to be the pick. Grenadier, I believe, comes from the same source, and is a great beauty. Like Mrs. Berkeley, of which I was kindly given a bulb two years ago, it is an immense rich orange scarlet self, with a striking yellow base, of medium height. I measured one of the blooms at Vincent Square, and it was 4 inches long. It received a unanimous award of merit from the Narcissus and Tulip committee on April 30.—J. JACOB.

Coronilla glauca Outdoors.—This plant, about which several notes have recently appeared, thrives out of doors here. Enclosed is a photograph of one planted in October, 1909, from a thumb pot. It is now 5 feet 6 inches high, and has a spread of 6 feet 6 inches. It has had no protection during the winter and has been in full flower since January last and is only now going off.—R. COTTON, *Llwynon, Llanfair P.G., Anglesey*. [Unfortunately, the photograph was not sharp enough for reproduction.—ED.]

—I notice in *THE GARDEN* of April 20, page 189, and May 11, page 226, notes on *Coronilla glauca* flowering outdoors. My employer, the Right Hon. A. H. D. Acland, has one in full bloom on a west wall. It has been in bloom since December more or less, and is now a sheet of yellow. It is 7 feet high and about four feet wide. We have also a bush 2 feet high and about three feet through on a south border. These have had no protection, and appear quite hardy. It is a most desirable shrub. Mrs. Acland thought this might be of interest to your readers.—G. BATTY, *The Gardens, Dunkery House, Felixstowe, Suffolk*.

Fruit Trees for Garden Effect.—Your correspondent Mr. Wakely, page 215, issue May 4, raises a very interesting and sensible question about planting fruit trees for floral effect. Well-blossomed fruit trees are, I think most people will admit, magnificent sights, whether in small or large gardens. I can see as much real beauty—more, in fact—in a nicely-laden Apple bush of pink and white flowers, or a Pear with creamy white, than in many of our extolled usual garden plants. Coupled also with the pleasing show of the fruit blossoms is an ingratiating fragrance such as many border or pot plants never yield. For two or three years past we have, at Ken View Garden, Highgate, practically adopted the "effect" method with bush Cherry trees, not because the fruit is not wanted, but on account of the difficulty in protecting the trees from the birds when the fruit is ripening. Having attained rather

large proportions, the trees are not easy to net; consequently, very few Cherries reach maturity. But the trees are to be kept for their floral spring loveliness. Of course, I am not suggesting we need not trouble about fruit.—C. TURNER.

Choisya ternata.—I was much surprised just recently to meet with a very large specimen of this sweet-scented evergreen shrub growing in a somewhat cold, exposed position in our public gardens here. It is evident that when planted it was done in an error or sort of chance that it might live or die. In any case, no other one is in all the gardens. When introduced here from Mexico early last century, it was treated as a stove plant; but for many years, planted outdoors, it has been so done in very sheltered positions, usually on the south side of buildings. I regard the example I refer to here as showing that it is really quite hardy, and should have a position in the shrubbery of full exposure. The plant, which has been for some time literally a mass of pure white flowers that emitted very rich perfume, is some six feet in height and seven feet through. As seen here full of hard wood that bears no evidence of injury from weather, I should regard this *Choisya* as one of the very finest of all our early-flowering shrubs.—A. D., *Kingston*.

Showing English Daffodils in America.—I read with great interest in the Rev. Joseph Jacob's "Daffodil Notes," page 208, April 27, "What About America." Once again this well-known gentleman has given a most valuable hint to Daffodil raisers and growers in pointing out a new opening for this lovely spring flower. The taking of a collection such as we often see at the Royal Horticultural Society's Hall would create surprise and find new roots in the hearts of the Americans. I think the difficulty in getting the flowers across the Atlantic can be overcome. The varieties selected should be well watered, which will help to strengthen the flowers. Shade them well even before there is any sign of the flowers showing colour. Cut them very young, as we all know they will fully develop in water. Tie three flowers together, get some damp moss and cover the stems from bottom to top about one inch off the flowers, and about one inch off the bottom, fasten it with raffia, and then get some paper and place it over the moss so that the damp does not strike the flowers. I should be glad to hear more on this important subject.—J. SHNEIDER, *Bewdley Hill, Kidderminster*.

Roses with Beautiful Foliage.—I think Fellenberg should take its place among the Roses valuable on account of their decorative foliage. It has many other virtues. I have a bed of it this year making promising and beautifully-coloured growth. May I add how much pleasure Mr. S. Arnott's note on *Fritillaries*, page 231, issue May 11, gave me. I have groups in my wild garden which are always much admired, and especially one rising from a carpet of white *Periwinkle*. They have the merit of constancy. I have one or two bulbs, white, which were collected near the Thames by a friend nearly twenty years ago, and which come up every spring in an uncared-for part of the garden with astonishing persistency.—ELLEN E. STEVENSON, *Stoke Poges*.

—The very interesting article on this subject and the comments on Mr. Darlington's paper on page 228, issue May 11, will cause many readers to reflect deeply on the subject. Both hedges, foliage and wood of some of our cultivated Sweet Briars are very beautiful in combination, and I have used them largely

on pillars in the garden. The side branches, when cut and placed in tall vases as soon as the fruits are fairly well coloured, look charming. I used to cut back the side shoots freely every year in this way. Another lovely Rose, Mme. Berard, yields many flowers in the autumn, and at the same time the young foliage is exquisite. If placed in water in a dark cellar for one day and night, it will remain fresh much longer than if cut and placed in the vases forthwith. The foliage of Dorothy Perkins in some seasons is very beautiful, and may be cut at times with clusters of late flowers.—SHAMROCK.

Exhibiting Daffodils.—Perhaps as an exhibitor of long standing, I may give my experience on this subject, for what it is worth. It is no easy matter to cut and pack and bring 1,000 or 1,500 blooms to an exhibition across the (it may be stormy) sea, and subject to railway vibration and the tender mercies of railway porters, and, worse than all, cartage. Mr. Watts, in his letter in your issue of May 11, displays considerable irritation over the paper collars often used by exhibitors to protect their flowers in transit. Incidentally, he pays far too high a compliment to these harmless devices. No paper collar on earth, or even a cast-iron one, will prevent a weak or unsubstantial flower from buckling, and I make a present of the device to all possessors of these undesirable flowers. But what a paper collar may do is to enable the possessor of one or two blooms of some excellent flower which he deservedly prizes, and for which he may have paid a good deal of money, to get them to a show in proper condition and truly representative of the plant. If there are enough flowers of a variety—five or six—they, to some extent, protect one another; but the solitary bloom of one precious seedling is a very different thing, and needs special care and skill in packing, and this is where a paper collar or other similar device comes in, to preserve, not to create, the flower's substance. When flowers have to lie, perhaps for twenty-four hours, in a box exposed to all the adverse conditions I have named as incident to travel, a florist has a perfect right to protect his wares in any way his ingenuity may devise. Florists tie up their flowers when shown in pots with stakes and all sorts of contrivances to mitigate the damaging effect of railway vibration and cartage, and the exhibitor of cut flowers has a perfect right to do the same. Nor do I perceive of what use a "pronouncement" on the subject would be—definite or indefinite—unless an "inspector of boxes," or, rather, an army of such inspectors, were appointed to see that every flower was so packed as to give it a fair chance of being destroyed in transit. The subject of tasteful arrangement is a difficult one, and I personally think if the arrangement does not fall below a certain standard of merit, it had best be left out of consideration in the smaller classes of competitive awards. If an exhibitor brings really fine flowers to a show, I do not think he should be penalised because after a night journey, perhaps, or the very early rising that shows necessity, his arrangement of his flowers is not quite perfection. I confess my sympathies go out in no small measure to the poor flustered exhibitor who is between the Scylla of price and the Charybdis of classification, and, moreover, has to reckon with some accident which at the last moment obliges him to substitute another flower for one he had intended to stage, and of which he has forgotten both the price per dozen and the classification.—F. W. CURREY.

The Netted Willow.—The note in THE GARDEN, page 213, issue May 4, on *Salix sesquiteria* reminds one of the uses of some of the dwarf members of the genus in the rock garden. The native *Salix reticulata*, for example, is a pretty subject for the shady or, for that matter, the sunny parts of the rock garden in any place where small creeping plants of pleasing foliage are required more than flowering plants, as the garden should have room for both. In *S. reticulata* we have a close-creeping shrub, rising only 1 inch or 2 inches high and having pleasing little roundish leaves, all charmingly veined in a pretty system of reticulation. The little catkins are on long stalks. Although a native of the high mountains of Scotland, it is quite a good plant for the lowlands, and appears to grow in either dry or moist soil.—S. ARNOTT.

Manures to Deepen Colour in Roses.—All who grow Roses in pots and under glass know how difficult it is at times to obtain blooms of the correct colour. Some varieties, especially the yellows, are apt to come very pale in the early stages. Pelargonium-growers find sheep-manure a very excellent stimulant, and Rose-growers are also proving this manure to be very good indeed applied as a top-dressing or in liquid form. Most of the older growers relied upon soot in liquid form as an aid to colour, and this, in combination with cow-manure, is still one of the best compounds for stimulating Roses; but I would strongly advise a trial of sheep-manure if it is available. It can be applied in a far more liberal quantity than guanos and such-like, and is much safer to use.—P.

The Century Plant at Kew.—As if to celebrate this eventful year, the largest Agave at Kew has taken the bold step of producing a magnificent flower-spike. It is indeed a bold step and a final one, marking the close of the history of this stately specimen. After flowering its purpose in life will be nearing completion, and the plant will assuredly succumb. Other Agaves lay claim to the title of Century Plant from the fallacious supposition that they flower once in a hundred years, Agave americana being the best-known instance. The specimen under notice is that of Agave atrovirens. The immense flower-spike is over twenty feet high and is still growing. The thick, fleshy leaves compose a gigantic rosette. The leaves are broad and some six feet in length, each terminating in a formidable spine about two inches long. The species is a native of Mexico. It was introduced in 1860, and is synonymous with *A. salmiana*.

FORTHCOMING EVENTS.

May 27.—Bath Gardeners' Debating Society's Meeting.

May 28.—Wood Green Horticultural Society's Meeting.

May 30.—Manchester and North of England Orchid Society's Annual Meeting.

June 1.—Société Française d'Horticulture de Londres Meeting. Bradford Paxton Society's Meeting.

THE FLOWER GARDEN.

SOME INTERESTING HARDY PRIMULAS.

Primula cockburniana.—This is a Chinese Primula, perennial in its native habitat, but in this country it is difficult to grow as such. It generally dies after flowering, but, given suitable position and soil, a few of the plants may survive from year to year. As it seeds freely and the seed germinates well, it is better to treat it as a

P. deorum, from Bulgaria, is also a bog plant, probably given a good name to help it through life. In my opinion this Primula is not worth the trouble of growing. It is rather rare, expensive to purchase and difficult to grow. The scape, which is from 5 inches to 6 inches high, carries a unilateral, slightly-drooping umbel of five to ten flowers of an intense purple violet colour.

P. Parryii, from the Rocky Mountains, is very hardy and superior in every way to *deorum*. It is easily grown, thriving well in the open ground.

The scape is from 8 inches to 16 inches high, erect, robust and carries a simple, many-flowered umbel of bright purple, yellow-eyed flowers. Both *glutinosa* and *deorum* should be left alone by the beginner.

Morelands, Duns. JOHN MACWATT.

TULIP NOTES.

Anarchism in Tulipdom.—I must have my annual growl about the naming of Tulips. Every firm and man and woman is a law unto themselves in this respect. Why on earth one firm should buy Yolande and then call it Duchess of Westminster, and another Mrs. Potter Palmer and call it Fashion (as if the Cottage Fashion was not enough), and a third Goudvinck and re-christen it Golden Bronze, I cannot imagine. This is a sample of what I mean among Cottages and Darwins, and it is just as bad with the early varieties. I happen to know very many of these little vagaries, but it must be aggravating to buy Bronze Queen and when it flowers find it to be Clio, or to get Mrs. Clark and wonder next spring where all the Mrs. Moon came from. My practical advice to purchasers when ordering "new names"—that is, names which they have not come across before—is to be wary—very wary. Many are all right, but some are not.

Too-Much-Alike Varieties.—I really do not know into how many hundreds Darwins might not run if a complete list were to be made. In some the differences are so trifling that for practical garden purposes they are the same. I have, for example, this year, Night, Faust and Ravenswing, three exceptionally fine tall, dark varieties, but any one is virtually a replica of the other two, and the three are not wanted. Edmée, Baron de la Tonnaye and Calliope, as it was sent to me, are three more of which one might well say, when we see them blooming together, "How happy could I be with

any one, were the other fair charmers away." Moral: Now that Tulips are becoming more sought after, has not the time come for the Royal Horticultural Society to bracket too-much-alike varieties? Such a list would be very handy.

Some "Quite Nice" Tulips.—In taking notes one cannot help overhearing many remarks of bystanders. Their adjectival ejections are as finely graded as the explanatory word or words before "eggs" in a shop window. "Quite nice," I have come to the conclusion, is a grown-up and polite way of saying "jolly good." So here goes



THE CENTURY PLANT (AGAVE ATROVIRENS) ABOUT TO FLOWER AT KEW. VISITORS TO THE GARDENS DURING THE INTERNATIONAL EXHIBITION SHOULD MAKE A POINT OF SEEING IT.

biennial. The flowers, which are of a most beautiful orange scarlet colour, are borne in tiers on erect, slender stems about a foot in length. It makes a pretty and decorative plant when grown in a cool greenhouse, and, being quite hardy, does equally well in the open ground.

P. glutinosa is a bog plant, easy to grow, but almost impossible to flower here. I have grown it in quantity for years, and have rarely seen it in flower. I have compared notes with other growers, and find their experience similar to my own. This is a beautiful Primula and flowers freely in the Alps, where it is found.

for some "jolly good" Tulips which I have grown this year.

Short Darwins—that is, those which grow about twenty-two inches high. Bleu Amiable is a blue-purple of an elegant open Grecian vase shape with a very lovely interior, as the blue base is surrounded by a wide zone of rich purple, which gradually fades into lighter shades towards the top. Harry Veitch has appealed to a great many this year on account of its dark rich crimson colouring; it is a large flower, and as good for pots as for the open. William Pitt, my colour-chart tells me, is a deep shade of blood red with a brighter edging to the petals. I had never realised till this year what a remarkably good thing it is. Suzon, although a trifle taller than those mentioned, is a good-sized flower of a delightful shade of warm, pale pink, with a deep, almost salmony rose interior. It happens to be next to Prince Maurity, which is a plant about the same height and of a pleasing rich claret tone. The contrast is admirable.

Taller Darwins.—Mr. Farncombe Sanders reigns supreme in its own colour. I call it a vivid pinky rose, but other eyes see it a "vivid red" or a "dark crimson"; when the latter describer saw it he must have had blue spectacles on. "Fiery rose scarlet" is much better—possibly, even a better description than my own. Viola would assuredly be noted by all who love the dark claret shades. It has a big, well-shaped flower, something like Giant; but whereas there is a dulness in a bed of this latter, there is nothing of the kind in Viola. For those who prefer a blue-purple darkness, give me *Moralis*. Kirke's plum with bloom on that will not wash off is how I always describe it to myself. It has a little of Zulu about it, but it does not look quite so much as if it was walking on stilts. Rose Beauty, which, strictly speaking, is a Cottage, happens to be alongside it. I am generally congratulated by visitors on my colour perception in placing the two together. As a matter of fact, it is pure luck that the two are growing where they are, but, nevertheless, the result is a very happy and striking one. Rose Beauty is a Darwin in all but name, of a real bright, clean rose, somewhat after Cassandra and some of the choicest of Mr. A. D. Hall's pure-based seedlings, of which I happen to be the fortunate possessor. Mauve Clair belongs to the mauve and lavender group, of which Erguste and Rev. H. Ewbank are well-known examples. But it is much taller and larger, and has a very distinct pale lavender edge to its petals. Just at first it is not as attractive as it might be; but give it time, and then you get a beautiful flower. Michelin, to which I am indebted

to my friend, Mr. Leak, for an introduction, has a large fine bloom of a pleasing shade of old rose, with a paler shade at the edge of the petals. It makes a very bright spot of refined colouring, and it is one of my new ones, of which I hope to get more this autumn. But I am running on regardless of the Editor and my paper. So many varieties are competing for the honour of being the full stop that I have, metaphorically speaking, put them all in a bag, and out has come Prince of the Netherlands. Yes! it is well named. It looks a Prince among its compeers, Edmée, Mrs. Krelage, La Fiancée, Baron de la Tonnaye and the whole company of edged roses and pinks. It is tall and majestic, and there is a warm, soft tone in its rosy pink that I cannot, at the moment,



VIEW IN THE HALL AT CHELSEA HOSPITAL.

associate with anything close. Everyone puts it down; but, alas! it is still a little expensive for ordinary mortals to order by the hundred. Some day soon, as it is a grand doer, everyone will have it in their garden.

JOSEPH JACOB.

HABERLEA RHODOPENSIS.

GROWN on the shady side of a rock garden, packed between stones in a vertical position, such as the *Ramondias* require, this interesting *Gesnerad* will render a good account of itself. It is a native of Eastern Europe, and in the near vicinity of the Shipka Pass in the Balkans, it grows freely and flowers in wonderful profusion throughout June. It is naturally a cool and shady loving plant.

THE ROYAL HOSPITAL, CHELSEA.

ITS HISTORY AND TRADITIONS.

THE soldiers' hospital at Chelsea, in the grounds of which the Royal International Horticultural Exhibition is being held, is one of the most precious of our public buildings. Although it is not so great and splendid as the sailors' hospital at Greenwich, yet it is a most perfect and singularly little-altered example of a civil building designed by Sir Christopher Wren, and executed without modification or delay under his direct supervision. The story of its origin, its founding, its erection and its organisation is among the most interesting pages of our domestic history. As early as the reign of Elizabeth, the principle that the State should look after disabled soldiers was recognised, but very little was done practically in the matter until after the Restoration in 1660. The following year Sir Stephen Fox became Paymaster of the Forces and actively urged the cause of the maimed members of the Army. It was not, however, till long after he had ceased to be Paymaster that he succeeded in getting his scheme adopted. This scheme took the form of obtaining land and erecting buildings for the housing of Army pensioners.

The first question was the site, and it was considered that Chelsea, then a country village conveniently near London, would be in every way suitable. Charles II., on regaining the throne, had found an abandoned college and twenty-seven acres there in possession of the Crown, and had given them to the newly-formed Royal Society, of which John Evelyn and Sir Christopher Wren were original and active members. The Society found no use for the land and were ready to part with it at a reasonable price. We therefore find in Evelyn's Diary, under the year 1681, the following

entry: "Sept 14th, Din'd with Sir Stephen Fox, who proposed to me ye purchasing of Chelsey Colledge, which his Maty had some time since given to our Society, and would now purchase it againe to build an hospital or infirmary for souldiers there, in which he desired my assistance as one of the Council of the R. Society." The transaction took place, and additional contiguous land was soon afterwards added, mostly purchased from Lord Cheney, who was the principal Chelsea landowner, and whose name has been retained in more than one of Chelsea's thoroughfares. Two months after the meeting of Evelyn and Sir Stephen Fox, Letters Patent were issued under the Great Seal, declaring the Royal intention of creating a hospital for the relief of such land

soldiers as were or might be lame or infirm in the service of the Crown, and endow it with a suitable revenue. In the following February the first stone was laid by the King. Previously to that, Sir Stephen, who is described by Evelyn as having "the whole management of this," had asked the diarist "to assist him, and consult what method to cast it in, as to the Government." They worked together in Sir Stephen's study, and framed a scheme of the necessary officials and household, their duties and emoluments, and also regulations for the conduct of the institution, "which was to be in every respect as strict as in any religious convent."

Sir Christopher Wren had accepted the post of architect, and had produced the plans. In May he went in company with Sir Stephen and Evelyn with his "plot and design" to Lambeth to obtain the Archbishop's approbation of them. Until the land was needed it was let out as a farm to Thomas Frankelyn, to whom thirty pounds was paid "in full satisfaction for damage by him sustained in his crop of turnips, in that part of his ground that was laid to the hospital in the years 1682 and 1683." Such is the story of the beginnings of the hospital as history paints it.

Soon after the building began, the Earl of Ranelagh became Paymaster, and his name is connected not only with the building and completion of the hospital, but with the history of that part of Chelsea. He was much in favour with William III., who granted him, in accordance with the rash and improper mode in which that

Sovereign squandered the Royal domains until Parliament restrained him, the whole of the eastern portion of the land that had been acquired for the hospital. On this land the Earl built a residence, and it would appear that he employed on its erection and decoration some of the same craftsmen he had under him at the hospital. They were men much employed by Wren. Maurice Emmett was the chief bricklayer here, as he was at Whitehall and at Hampton Court. Thomas Wise and Thomas Hill are master-masons at Chelsea as they are at St. Paul's Cathedral. At both these buildings we also find Charles Hopson, Roger Davis and John Smallwell as master-joiners.

The external materials of the hospital are a purple-brown brick for the walling and a rubbed red brick for the window openings. The coigns and the pedimented centres of the chief elevations are of stone, while the thick green slates of the hipped roof rest on an ample cornice. Internally it is the fine treatment of the woodwork that arrests attention. The staircases are very plain,

but are splendid in their amplitude and the easy swing of the ascent. This is greatly to the convenience of the aged and infirmed pensioners lodged in sixteen great wards or galleries, each occupying on different floors half the length of one of the sides of the building, which forms three courts. Oak is the wood universally used, and there can be no doubt that the whole of the joinery was designed by Wren himself. It is simple and reserved, and very practically adapted to serve the purpose in view. But it is all so good in line and proportion as to be most effective and satisfying in appearance. A row of windows occupies one side of these galleries, and on the opposite side, broken only by a great central fireplace, is a set of cubicles. They are partitioned off in Oak wrought in the large dignified panels and the rich and ample cornice mouldings of the period. Each one has, next to its little doorway, a big hinged panel which enables the pensioner

and reading room. The decorative scheme is dignified but simple. High wainscoting of Oak lines the walls. Above this, across the entrance end, runs an Oak gallery supported on carved consoles and with enriched mouldings to its panels. In the centre is a carved cartouche containing the Royal arms and surrounded with Palm branches. The west, or high table end, is principally occupied by a great fresco painted by Verrio, which, according to the inscription upon it, was given by Lord Ranelagh, although in the hospital accounts there appears the item £210 15s. paid to the artist "on account of painting in y^e hall." The subject is Charles II. in the same classic dress which he wears in his statue by Grinling Gibbons in the centre of the court, while behind him is seen a presentment of the hospital buildings. The painted area is carried on for some distance along the side walls, where it represents trophies of arms, and the whole is bordered by a representation of a

carved and gilt frame. Below it the wainscoting has a moulding beautifully wrought with wreathed Oak leaves intermixed with flowers. That is the utmost elaboration that the woodwork of the hall reaches; but in the chapel we find carving of great richness and excellence.

What was then called the "council chamber" is now known as the Governor's State Drawing Room. It is a large and beautifully-fitted apartment occupying the south-eastern corner of the centre court on the ground floor. James II., during whose reign the

Council Chamber, where his initials, as well as so many other parts of the hospital, were fitted, appears to have taken a very direct and personal interest in the work and urged it on in order that it might be occupied by the intended pensioners. He, therefore, gave many verbal orders to Lord Ranelagh, who had to explain the position fully in a minute to the Lords of the Treasury when he presented his accounts in the following reign. He would not, however, find any difficulty in obtaining payment, for he was, much favoured by William III. After his death his house and gardens passed into hands that laid them out for public use, and they became the famous Ranelagh Gardens of the eighteenth century. William III.'s foolish and imprudent gift has needed, in more recent days, the outlay of a large sum in order that the hospital might regain the portion of the ground that it had lost. By a happy chance it has come down to our days almost free from what the flux of fashion labels and re-labels "improvements."



CHELSEA HOSPITAL FROM THE EXHIBITION GROUNDS.

to enjoy privacy if it is closed, or to look out on the life and general activity of the ward if he opens it. Here is the account of one of the joiners for his share of the work in these wards and in adjacent premises:

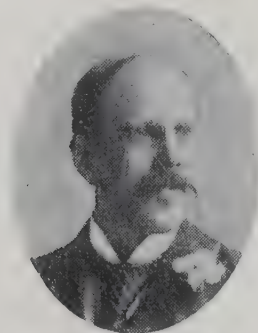
"Charles Hopson, joyner, his taske worke wainscoting the second & third galleries in the west wing, viz, xiiijth, and for pieces of wainscoting in the great stairecase and kitchen pavillion, the great stairecase by the pavillion next the Thames, in the west wing, and in the hall, viz, lxijth xijth iij^d ob."

Most of this, though fine, is plain joiner's work only; but more ornamental treatment begins with the hall which Hobson wainscoted. In the middle of the north elevation of the centre court and enclosed under a lofty portico lies a great square vestibule, and right and left of it open out the chapel and the hall, each of which is 108 feet long and 37 feet wide. The pensioners now mess in their wards, and the hall is their play

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G. INGRAM.
Financial Secretary

REVIEW OF THE ROYAL INTERNATIONAL SHOW.

IN sunny weather the long-looked-for Royal International Horticultural Exhibition was opened by Their Majesties the King and Queen at twelve noon on Wednesday last.

It is safe to say that the ancient craft of gardening has never before attracted so large and brilliant an assembly. Not only were Ambassadors representing all the important nations there, but statesmen, men of letters, and every form of distinction were present. Their Majesties were received by His Grace the Duke of Portland, who is president of the exhibition, and, after shaking hands with the Ambassadors and some of the directors of the exhibition, made an extensive tour of the tents and grounds and expressed themselves as being very pleased with all they saw.

Taken as a whole, the exhibition is quite up to expectations. Such a display of rare and lovely flowers, rock gardens and plants has never been witnessed in this country before, if, indeed, anywhere in the world.

The large tent alone is a sight not easily to be forgotten. Roses, Rhododendrons, magnificent banks of Ferns, fruit trees, greenhouse and stove plants of various kinds, as well as new Chinese plants, are represented on a luxurious scale. The Orchid Tent, too, is a feast of colour, and it would be difficult for anyone to estimate the value of the thousands of beautiful plants that are staged in it. Fruits and vegetables, though not shown on a very extensive scale, are exceptionally good, and it will be a source of gratification to all connected with the show, or indeed gardening of any description, to know that His Majesty the King has secured two first prizes for fruit.

The rock and other gardens are an exhibition in themselves; for design and workmanship, as well as good taste, the majority are excellent, and it is as an educational feature that we think these will be most appreciated.

The characteristic that strikes us more forcibly than any other at the moment of going to press is the high quality of all the plants, flowers, fruits and vegetables that go to make up this wonderful show. It is a marvellous tribute to the skill of gardeners in this and other countries, and will, we hope, be the means of drawing attention to a class of men who in the past have not had their due share of recognition from the general public.

In the pages that follow will be found a review of the best exhibits in the show. Owing to the fact that this issue had to go to press immediately after the opening of the show, it is not possible to give the names of prize-winners, except in a few instances, but these are all being published

in a handy book by the directors of the exhibition. Next week we hope to give descriptions of the new plants that have gained awards, as well as a review of the horticultural sundries.

THE ROCK GARDEN.

To say that there are rock gardens by the acre, that there are hundreds of tons of rock representative of many diverse types geologically from various parts of the country, associated with hundreds of thousands of alpine and other hardy plants gathered together, would

all our readers as something to see, and certainly worthy of study and emulation. Hitherto Messrs. Wallace have given proof of their masterly grasp and finished work in this field, but never before have they attempted anything on such a magnificent scale as this or accomplished a work that has placed a crown on the head of all previous efforts. It comprises some eight thousand square feet of a rather crudely shaped valley between trees. And out of this have been fashioned rock and water gardens, an Old English terrace garden, brightly furnished borders, wood hut and Lily plantations, with waterfall and the like. The conception of the idea is as great as the work is finished and complete and natural—as natural, indeed, as the



THEIR MAJESTIES THE KING AND QUEEN INSPECTING THE FLOWERS AT THE EXHIBITION.

convey to our readers but the vaguest idea of the magnitude of a work which for weeks past has engaged the attention of all who garden chiefly in the open air.

In some instances, notably that of Messrs. Wallace and Co., Colchester, a great work has been achieved, the magnitude of which can only be gauged by the time the work has been in hand and the numbers engaged. For a month or more some twenty or thirty men have been busy excavating, moulding, shaping and building up this splendidly-conceived rock and water and terrace garden, with the result that we have presented to us such work in the exhibition field in a perfect manner and on a really magnificent scale. In the open it is one of the greatest features of the whole exhibition, one to which we would direct

combining of so much in such an area renders possible. It is, indeed, a praiseworthy and successful attempt of adapting the work to circumstances and surroundings, and no effort has been spared to accomplish the end in view. At the entrance the visitor is first led by way of an easy grassy slope to the water's edge, and anon by rather spacious, well-conceived pathways to other parts. Presently, by way of steps, the terrace garden is reached, and from this the border and the woodland beyond. The work of excavating and forming the whole has involved the moving of a great mass of earth, height and depth and varying aspects having been gained thereby. The rock chiefly used is Purbeck limestone of oolitic character, beautifully stratified and in every way eminently suited to the work.

The mass and variety of plants employed is enormous, and it is quite impossible to enter into details concerning them. Everywhere are groups and colonies of plants deftly planted and set out with discretion and skill—now a mass of *Primula*, *Trollius*, or *Epimedium* near the water's edge; fine groups of *Orchis foliosa* or *Yuccas*; delightful batches of hardy Ferns adorning the sides of the cave and, not less beautiful, the Iris border, where many delightful varieties are to be seen in bloom. This fine piece of work is non-competitive, and without hesitation we pronounce it the noblest of its kind that has ever appeared at an exhibition.

by our readers, and will not be missed, indeed, by any lover of alpine plants. *Iris cristata*, exceptionally well grown, is also charming in this group, and so, too, are *Oxalis enneaphylla* and *Ramondias*.

Messrs. Whitelegg and Page, Chislehurst, have arranged a pretty rockery bank with water pool, and associated therewith a number of suitable plants. *Cheiranthus Allionii* and *Saxifraga aizoon rosea* are of much merit, while of border plants nothing stands out so prominently or well as the new *Geum* Mrs. J. Bradshaw. Very good, too, are the alpine *Columbines* in the group, which cannot well escape notice.



MESSRS. R. WALLACE AND CO.'S ROCK AND WATER GARDEN.

THIS WON THE CUP OFFERED BY QUEEN ALEXANDRA FOR THE BEST ROCK GARDEN.

In another direction Messrs. Backhouse and Son, York, have a particularly good piece of rockwork, one of 600 feet in the competitive section and another of some three thousand feet or four thousand feet non-competitive, the latter combining water as well. In this also there is seen some excellent work, the whole being richly clothed and furnished with rare and good plants. Here the visitor may find great colonies of delightfully-grown *Ramondias*, *Pinguicula grandiflora*, *Anemone sulphurea*, *Oxalis enneaphylla*, *Viola pedata*, *Primula sikkimensis*, *P. cockburniana* and *P. japonica*, *Celmisias*, *Saxifraga longifolia*, *Orchis foliosa* (a superb lot), *Viola gracilis* and the rarely-seen *Ranunculus Lyallii*, with its handsome flowers of glistening white above a setting of glossy peltate leaves. This is perhaps one of the rarest plants in the exhibition, one to look for and admire.

Messrs. Jackman and Son, Woking, have a rock-work display of a non-competing kind extending to about one thousand feet, handsomely and freely furnished with many choice things. The splendid specimen examples of the ever rare and beautiful *Acantholimon venustum* are a great treat, magnificent tufts the like of which we have not seen before. This is a subject not to be missed

Mr. J. Wood, Boston Spa, Yorks, has a fine exhibit in the competitive section, the well-weathered York limestone in good stratified examples attracting attention at once. Among interesting and good plants to be looked for are *Iris Lacustris*, *I. cristata*, *Cathcartia villosa* (rich golden Poppy-like flowers from hairy leafage), *Trilliums*, *Saxifraga paradoxa*, *Aquilegia glandulosa*, *Edraianthus* and many others. *Primula sikkimensis* and *Cypripediums* are also above the average. This group is fronted by a serpentine streamlet, and is nicely arranged.

Near by, Messrs. Barr and Sons, Covent Garden, have a similarly-sized rock garden group and rock wall, the rock of the former being also of York limestone. There is a remarkable variety of plants here, and the casual observer will not be likely to miss the Ferns, *Cypripediums* and *Saxifrages*, any more than the specialist will overlook the fine examples of *Onosma Bungei*, *Anemone sulphurea*, *Primula cockburniana*, *Sarracenias*, *Irises*, or other good plants.

Messrs. Piper, Bayswater, have a most distinctive rock garden exhibit in the 600-foot competitive section, the chief feature of which is a huge cave with water overtopping in a pool and streamlet

below. The sides and banks are for the most part deftly planted—possibly a little over-planted and over-coloured here and there—while the crevice planting is certainly good and usefully suggestive to those contemplating similar work. The variety of plants employed is very great, some of the finer being *P. bulleyana*, *P. cockburniana*, Cobweb Houseleeks, *Fabiana imbricata*, *Edelweiss* and *Saxifraga Cotyledon*. A superb colony of *Cypripedium spectabile* is not likely to escape the notice of anyone interested in hardy flowers.

In near proximity is an effective rockwork arrangement from the Guildford Hardy Plant Nursery, and here the visitor will quickly get into touch with so good a plant as *Polygonum sphærostachyum hybridum*, with its rosy-coloured spires; with *Celmisia spectabilis*, or the delightful miniature shrub *Enonymus microphylla argentea*. *Anthyllis montana*, the semi-shrubby *Lithospermums graminifolium* and *intermedium*, *Primulas bulleyana* and *Unique* and the rare *Swertia perennis* are all things to be looked for in this excellent group.

In due course the rambler amid rock garden scenes will come upon a splendid arrangement by Mr. Maurice Prichard, Christchurch, Hants, who, while embracing an area of some three thousand or more feet, has achieved a splendid success with a rock and water garden and moraine, the latter of which alone is capable of fixing the lover of alpine vegetation for an hour or more. It is most likely to be in the latter range, should the visitor get into touch with the owner, for Mr. Prichard is nothing if not enthusiastic, singularly genial, and ever willing to impart information about the plants he loves so well. And the hosts of them, their beauty and variety and the consummate skill in placing and arranging them, goes far to tell of the enthusiasm of the man and his knowledge of the work. Among the gems in the group, the visitor must not overlook *Helichrysum frigidum*, *Omphalodes Luciliae*, *Oxytropis uralensis*, *Silene Hookeri*, *Sedum pilosum*, *Arenaria verna fl.-pl.*, *Thalictrum pubescens*, *Edraianthus pumiliorum* and *Oenothera ovata*. *Saxifragas* are there, too, in plenty, the lovely Dr. Ramsay an aristocrat among them. The arrangement is that of rock and water garden combined, and is non-competitive. The rock is the Purbeck oolitic limestone, selected with care and arranged with skill. Bold masses of *Funkias*, *Irises* and *Trollius* occupy congenial spots, and, generally, those hungering and thirsting after knowledge will find much that is useful and suggestive in this excellent piece of work.

Messrs. William Cutbush and Son, Highgate, N., occupy a position not far away, and, covering an area of about three thousand feet, have got together a rock and water garden of delightful aspect, richly endowed and furnished with suitable plant-life. This group is singularly rich in bulbous plants, and Lilies more particularly, and of these alone in their great variety and beauty Messrs. Cutbush have provided a great feast to which every reader of these lines is cordially invited. Such species as *Grayii*, *Brownii*, *Humboldtii magnificum*, the lovely golden-flowered *Parryii*, *Kellogii*, *Martagon album* and the stately *giganteum* are all there, not in feeble array, but in great representative abundance. A great colony of *Cypripedium spectabile* is a feature; the unique *Ostrowskia magnifica* is there, too; and so, also, are the rare *Meconopsis sinuata* and the pale yellow *M. integrifolia*. *Armeria lauchean* contributes a fine bit of colour, while shrub, alpine and aquatic in variety

give their quota of interest and value to a very excellent whole.

Messrs. J. Carter and Co. have a large and comprehensive Japanese garden. On entering the garden we pass under a thatched archway, flanked by two beautiful old bronze Japanese lanterns. This entrance alone is a feature of great interest, but it is simply a part of the whole scheme and merges into the picture. Passing on, towering above the grouped flowers is a very fine old stone lantern, aged 450 years, one of those quaint and exceedingly beautiful examples of the art of the Far East. Near by is another beautiful ornament in bronze. This represents the sacred Hoho bird of Japan, with its seven tails. To the right is a Japanese well, with the pulley beneath a quaint thatched roof, and close by is a very fine Japanese monument, over five hundred years old. At the far end the lake is spanned by a light and graceful Japanese bridge with a house in the centre. But the *pièce de résistance* is a very fine bronze eagle on a rugged stump, standing about eight feet high, specially procured from Japan at a considerable cost. The whole garden is furnished with very old and quaint stone lanterns, and as the exhibition is open until ten o'clock at night, the scheme of illumination is of plain green Japanese lanterns, which give a very charming effect.

Mr. H. Hemsley, Crawley, who entered the 600-feet rock garden competition, has a very pleasing group in rock composed of Sussex sandstone, planting it freely and well with alpines and shrubs. *Sutherlandia frutescens*, *Onosma taurica*, *Shortias*, *Pentstemon glabra rosea*, *Cathcartia villosa*, *Edelweiss*, *Saxifrage*, with *Onosma stellulata*, are among important plants to be searched for in this interesting group. Adjoining there is a tiled garden of formal outline that is bound to catch the eye.

Baker's, Wolverhampton, have a rock and water garden arranged on a superficial area of 2,000 feet, planted in a most effective and attractive way. Quite a variety of useful plants are employed, though we would especially direct the attention of our readers to such individual subjects as *Cathcartia villosa*, *Achillea Kellereri*, *Oxalis enneaphylla*, *Campanula Allionii*, *Asperula suberosa*, *Dianthus subacaulis* and *D. arvensis*. The water garden portion is particularly well done; and, associated with moisture-loving *Primulas* and other suitable plants, constitutes a most agreeable whole.

Messrs. Ware, Limited, Feltham, have arranged a spacious rock and water garden on an elaborate scale, some six thousand feet being covered by this exhibit alone. Wall, rock and water gardening all enter into a scheme which is admirably conceived and well carried out. We can only regret that space will not permit us to enter into descriptive details.

Messrs. J. Cheal and Sons, Crawley, have an admirably-conceived pergola, rock and water and terrace garden all in one, or, rather, a continuance the one of the other. In conjunction with this the old Tudor garden and Lily pond are in delightful harmony, the rock garden, executed in Sussex sandstone, being among the things to search for and admire. The whole scheme is carried through on a most elaborate principle, the rock garden and pergola work being well worthy of a visit and close study.

Mr. H. C. Pulham, Elsenham, Essex, has a most elaborately-designed rock and water garden, covering a superficial area of some four thousand five hundred feet. Red Norfolk sandstone, at once good in colour and sympathetic to plant-life,

is that employed, and with a series of cascades and waterfalls a most effective whole is the result. In this way there is a difference of 15 feet or 20 feet between the upper and lower levels, shrub and plant of taller growth occurring in the former, with alpine, aquatic Fern-life and the dwarfest of vegetation occurring low down or at the water's edge. Many tons of stone appear in this exhibit alone.

Mr. Amos Perry, Enfield, has arranged between tents many good hardy plants, aquatics and Ferns in groups.

Mr. G. Reuthe, Keston, has a most interesting lot of things; and there are a score of others who have set up alpine and rock or allied exhibits with taste, forethought and skill, to which we have no space to refer in detail.

ROSES.

One has become so accustomed to viewing superb displays of our national flower at the Temple Show that no one could be surprised to find growers surpassing all previous efforts. Instead of the restricted space which made the grouping at the Temple somewhat cramped, there is here plenty

Although these notes are written before the awards are made, we should say the jury will have great difficulty in passing over the superb group of Messrs. Paul and Son of Cheshunt, a group worthy of the great firm that has so often carried off the gold medal, and which may be fortunate enough to secure the coveted cup of the Worshipful Company of Gardeners on this occasion. Weeping standards are here in all their beauty, from the gorgeous *Excelsa* to the dainty *Lady Godiva*. These Roses are worked upon a special stock, which, at least for pot culture, have the great merit of lightness of stem and elegance throughout. Among the splendid and well-flowered weepers we noticed one consisting of a quartet of beautiful sorts, namely, *Excelsa*, *Lady Godiva*, *Dorothy Perkins* and its white sport—a happy blending of colour and of kinds that bloom simultaneously.

We cannot in our limited space give the names of the great variety to be seen in this group, but will content ourselves with naming a few. Perhaps the best novelty is one of Messrs. Paul and Son's own raising, named *Freda*. It is a really superb Rose, "a pink *Bessie Brown*," as Mr. Paul termed it; but really we think this does not do it justice, because it appears to us to be of even more



SOME OF THE JAPANESE LANTERNS AND STORKS IN MESSRS. J. CARTER AND CO.'S JAPANESE GARDEN.

of scope that has given the floral artist all that he could desire. One's mind goes back to the shows of years ago, when there were no ramblers and no *Polyanthas*, and the groups then, although composed of a few huge specimens, were so totally different from those on view now as to really startle one by the great advance made in the culture of Roses in pots, and the large place taken by ramblers and *Polyanthas* as decorative plants. Not only do we find them in the large groups composed entirely of Roses, but they are also employed in groups of miscellaneous subjects, as well as to decorate the pavilions about the grounds.

elongated form than that well-known variety. A superbly-coloured *Juliet* is growing in standard form, and portrays the suitability of this unique Rose as a standard. *Nelly Johnstone*, Mrs. A. R. Waddell, *Arthur R. Goodwin*, *Lady Pirrie*, *Marquise de Sinety*, and *Queen of Spain* are magnificent, and the lovely little white *Polyantha Jeanne d'Arc*, the deep pink *Maman Levavasseur*, the brilliant *Jessie* and others complete the *tout ensemble* of this choice display.

Messrs. W. Paul and Son of Waltham Cross have also a noble group, the individual specimen ramblers being grand both in colour of blossom and quantity,

and they have been timed to a day. Paradise is really very fine, the quaint blossoms showing up like so many gorgeous stars. Elsie is a lovely flesh shaded sort, with very beautifully-formed blossoms, and American Pillar is so well flowered that no one can doubt its usefulness in the garden. A mass of the dainty blush pink Edward VII. is here shown, and a most charming Polyantha it is, perhaps one of the loveliest of all; and although sometimes the colours of this class alter when grown outdoors, we are assured this variety is even more beautiful in the open. Among the exhibition and garden varieties, Portia is well to the front, and the beautiful golden yellow of Lady Doune, its flowers borne upon erect stems, shows what a fine bedder it will be. Frances Charteris Seton is a novelty of decided merit and deliciously sweet; its cherry red colour and shapely blossom will commend it to all who love exhibition Roses.

Masses of Polyantha Roses go to the making up very largely of Messrs. Cutbush and Sons' group, and it is very fitting that this firm, who practically introduced Mrs. W. H. Cutbush, should be well

Society's shows, but to-day he is surpassing himself, not so much with the huge show bloom sorts as with grand masses of ramblers, forming perfect pyramids of bloom. The plants are particularly well flowered, and Mr. Mount has made good use of dwarf plants of Crimson Rambler as an edging, showing that this old Rose may be effectively used as a bush plant. A small group of highly-coloured Juliets are a marvel of colouring, and we are pleased to find that Mr. Mount has placed this Rose well away from reds, a colour that should never be placed near this unique variety.

Messrs. Hobbies and Co. of Dereham are making a very big effort towards showing what a Rose garden should be. They have, unfortunately, many plants that will be better in another week, so that visitors next week will see better the beauty of this group than those who visit the show on the opening day.

To the introducer of Crimson Rambler we naturally look for some good novelties, and Mr. Charles Turner has not disappointed us. The fine group from Slough has among its many

of the foregoing groups are to be found in the large tent, and go far to make this wonderful tent the great triumph it undoubtedly is. We should say no more splendid array of Flora's wonders has ever been brought together under one canvas.

In the same huge tent most of the minor classes for Roses are to be found. At one end are groups of pot Roses and cut Roses combined, and here we find some fine quality. Messrs. Frank Cant and Co. are very strong in this section, having really grand flowers of Gustav Grünerwald, Lady Mary Corry, Mrs. H. Stevens (a beautiful white Rose that will become a favourite) and also the marvellously-coloured Marquise de Sinety. We also noted a fine plant of the new Climbing Souvenir de Pierre Notting, which will be very welcome as a wall climber on account of its beautiful Maréchal Niel like blooms.

Messrs. W. and J. Brown of Stamford are displaying some nice bushy plants of Mrs. Flight, which show what may be done with ramblers as dwarf rather than as columnar plants. This group also comprises many choice things in cut form, the whole overshadowed by a large Laburnum growing in the grounds, whose golden panicles droop gracefully over the Roses, supplying a shade of colour that enhances their beauty.

Mr. George Prince of Oxford brings many lovely specimens of the Tea Roses he so well knows how to grow, and Mr. Hugh Dickson of Belfast puts up a group of pot plants of some of his lovely novelties, such as Mrs. C. Allan, Countess of Shaftesbury and the delightful Lady Pirrie, a Rose quite unique in its colouring, and one most adaptable for culture under glass. Mrs. C. Allan is not seen at its best here, for outdoors the colour is of that wonderful hue seen in Mme. Hector Leuilliot, with just a shading of pink. This is a Rose to make a note of, and is perhaps one of Mr. Dickson's best introductions for the garden.

Standard Roses in pots are grandly shown by Mr. Charles Turner, the trees the picture of health. These trees were potted up in the autumn of 1910, grown outdoors last year, the pots being sunk into the ground, and then brought indoors this spring. They were only top-dressed with good loam and Thomson's Manure. Amateurs should see these standards, as it is evidence of what may be done with standards as plants for conservatory decoration.

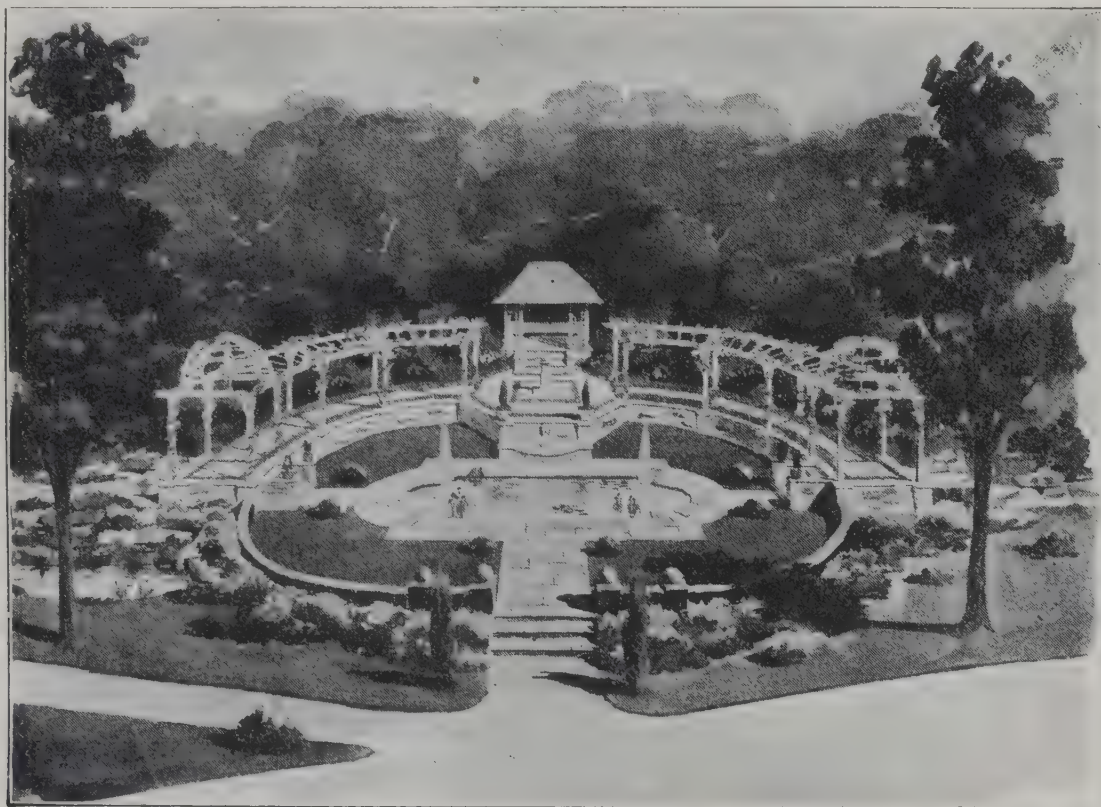
Messrs. Paul and Son have also some very finely-flowered standards.

Two competitors enter for the class for 100 plants of Polyantha Roses, namely, Messrs. Charles Turner and F. Cant and Co. In the first-named group the plants are elegantly arranged, and the sorts are the lovely white Katherina Zeimet, Aennchen Müller, Jessie, Mrs. Cutbush and Mme. N. Levavasseur.

In No. 2 Tent, Messrs. Prior and Son of Colchester have a very lovely group of choice things, and their cut blooms show they have lost none of the art as cultivators.

Messrs. Dicksons of Chester are using ramblers largely in their splendid group of miscellaneous plants in the large tent.

We fear the weather has been too much for amateurs, for up to the time of writing we could find only one group of pot plants. This one, however, is very excellent, and comes from James Brown, Esq., Heaton Mersey. It goes to show what we may expect when the spring show of the National Rose Society is an accomplished fact, a show which we may expect next year, according



THE OLD ENGLISH GARDEN EXHIBITED BY MESSRS. J. CHEAL AND SONS.

represented by these little pet Roses. Quite one of the prettiest Roses in the exhibition is the Baby Tausendschön, a variety, if we mistake not, that will be much sought after. Here it reminds us in colour of a very old Rose, Mme. Pierre Oger, only, of course, very small; but the flowers are prettily cupped and are produced in great profusion. Dwarf standard Polyanthas on the rugosa stock are elegantly dotted about in this lovely group, and one cannot but hope they will be more frequently planted in this form, especially as centre-pieces to beds of the same Rose or contrasting colours. The very brilliant Jessie is a variety that will soon largely displace the scarlet Geranium, for last year, when these plants were looking very sad, beds of this little Rose were as brilliant as one could wish. Masses of pillar Roses of such sorts as Mrs. Flight break up the group, and the whole forms a most superb spectacle.

Mr. George Mount is never so happy as when making bold displays. We have had some lovely groups from him this year at the Royal Horticultural

attractions two Roses that we venture to prophesy will be in every garden very shortly. One is named Ethel, a most dainty Rambler of the Dorothy Perkins type. It is so light and graceful in its clusters, and it has the merit of flowering some days earlier than Dorothy Perkins, a great gain, as all who love these Roses will admit. The other novelty is named Coronation. Out of doors its colour is much brighter than Excelsa; although so brilliant when grown under glass, the colour of Excelsa outdoors is somewhat dull. Coronation is of the Hiawatha type of growth; its flowers are large, fairly double, but showing a clear white centre with a wealth of golden stamens. This variety, too, is earlier than Hiawatha.

Polyanthas and ramblers are splendidly shown by Messrs. S. Low and Co., and one of the loveliest is Eileen Low, a Rose with the airy lightness of Jessie, but of a nice soft pink tint. This beautiful novelty originated with Messrs. N. Levavasseur and Sons of Orleans, a firm to which we are indebted for so many of these pretty Roses. All



ROSES SHOWN BY MESSRS. STUART LOW AND CO.

STOVE & GREENHOUSE PLANTS.

The most extensive exhibits of these plants are arranged in the huge tent in which are grouped a great variety of different subjects, hardy as well as tender.

Messrs. Sutton and Sons of Reading are, as usual, well to the fore, their exhibit, which is disposed around the well-known obelisk erected to the memory of those who fell in the Battle of Chillianwallah, being arranged in their well-known and most effective style. A notable feature of this exhibit is that the entire collection has been raised from seed. Particularly noticeable among the different subjects contributing to this wealth of blossom are Schizanthuses of different kinds, which have of late years become so popular; various sections of Cinerarias, including the comparatively new Reading Gem, and Calceolarias, of which Sutton's strain is renowned all the world over.

Primula obconica, too, shows well

the vast improvements that have of late years been effected in this species, not only in the size and shape of the flower, but also in the colour thereof. Gloxinias, which are numerous represented, include among their number the crimson-scarlet King George V. and Her Majesty, with pure white blossoms. From lack of space we can only mention the Begonias, Clarkias, Nemesias, Phlox and Nicotianas of different colours. The edging of fresh, rich green grass serves admirably as a foil to the bright-coloured flowers.

Messrs. James Cypher and Sons, Queen's Road Nursery, Cheltenham, have long been celebrated for their artistic groups of stove and greenhouse flowering plants, and in one of the competitive classes they put up a magnificent group, exceedingly light and elegant in effect. Another exhibit of

Messrs. Cypher's recalls bygone days, as it is made up of magnificent specimens of flowering plants. Some that cannot possibly be passed over are *Clerodendron Balfourii*, *Ixora Pilgrimii*, *Stephanotis floribunda*, *Statice intermedia*, *Polygala dalmaisiana*, *Erica Cavendishii*, *E. depressa*, *E. ventricosa* *magnifica*, *Azalea grandis*, *A. Model*, *Franciscea* (*Brunsfelsia*) *eximea*, *Ixora Williamsii* and *Bougainvillea Cypherii*, remarkable for the rich colour of its bracts compared with those of the better-known *Bougainvillea glabra*.

Messrs. E. Webb and Sons, Wordsley, Stourbridge, are showing many of the same kinds of flowering plants. The most conspicuous are arranged in semi-circular groups, and all and every one show evidence of high culture. Where all are so good it is difficult to single out any particular ones for praise, but the *Calceolarias*, *Schizanthus* and the *Cinerarias* of the *stellata* section are so fine that it is impossible to pass them over. Besides these different subjects, seedling *Hippeastrums* of a very superior strain are shown in quantity.

Near by, Messrs. Veitch are showing about one hundred and fifty of their noted strain of *Hippeastrums*. This strain has long been famous, and has many times gained high honours. The present exhibit is well calculated to maintain the high standard that Messrs. Veitch's *Hippeastrums* have now reached.

A startling exhibit of *Hippeastrums* is that set up by Messrs. R. P. Ker and Sons, Aigburth Nurseries, Liverpool. Ker's *Hippeastrums* are justly famous, not only for the high character of their blossoms, but also for the great variety that exists among them. While all are good, a few stand out in such a manner that their merits can on no account be passed over. Particularly striking are *International* (warm orange netted with red, with a white central band and a metallic violet suffusion in the centre of each segment), *Midnight* (deep blackish velvety crimson), *Salmon King* (rich salmon red), *Ophir* (yellowish buff, the nearest approach to a yellow flower, for which Messrs. Ker have been trying for some years), *Persephone* (flower of perfect shape, white, lined with red in the upper segments), *King George* (soft rose, light stripe at the basal half of each

to the remarks which the president let fall at the conference on Monday last.

No visitor to the show should miss the beautiful display of novelties put up in the French Section by M. Pernet-Ducher. It is one of the choicest groups in the whole show, and contains some seedlings not yet in commerce, varieties that will cause quite a sensation. Here we may find the superb Mrs. George Beckwith, a Rose that may even surpass Rayon d'Or. Sunburst is in grand form, and it is shown in two groups, one of its true colour, and another portraying the blooms that come from the hard wood, which are quite pale. It is such a splendid Rose that we can overlook this little fault. Perhaps it may be well to remove the first blooms in the early stage, as then the second crop from the young wood are sure to come the deep golden colour we love so much. Mme. Heriot is likely to be quite a sensational Rose when seen as it will come outdoors. It has the lovely colouring of *Beauté de Lyon*, with the shapely buds of the Hybrid Teas, and the growth is quite erect. President Vignet, *Souvenir de Gustave Prat*, Mme. Charles Lutand, *Lyon Rose*, *Lieutenant Chaure*, *Viscountess Enfield*, *Rayon d'Or* and *Arthur R. Goodwin* provide a sumptuous feast of colour such as no raiser has ever given hitherto.

In the same tent Messrs. Turbat and Gouchault are showing some grand *Polyanthas* that have quite large flowers, one, a white Yvonne Rabier, being a real gem.

Messrs. A. Dickson and Sons of Newtownards are showing some choice novelties; but at the time of writing we are unable to locate them. No one should go away from the show without seeing them, for we have found this group one of immense interest.



A MAGNIFICENT COLLECTION OF ROSES SHOWN BY MR. G. MOUNT, AND AWARDED SIR JEREMIAH COLMAN'S CUP

segment), Magnificent (rich crimson, lighter towards the edge, the crimson being there disposed in a freckled manner) and Pink Pearl (rich cherry pink).

Some two hundred seedling *Hippeastrums* are also shown by Messrs. William Bull and Sons of Chelsea, who for some years have devoted a good deal of attention to this showy class of plants. The varieties are good and well varied, while the condition of the plants leaves nothing to be desired. Particular note may be made of Brilliant (rich scarlet self), Enchantress (delicate blush), King George V. (glowing scarlet), Doris (delicate pink), Sybil (salmon), Primrose Dame (light primrose) and Loveliness (delicate blush rose).

Messrs. James Veitch and Sons, Limited, King's Road, Chelsea, are freely represented in the large tent. One group, consisting mainly of fine foliage stove plants, occupies a prominent position, and deservedly so, as it is made up of grand plants, beautifully arranged. Each individual plant will bear inspection from whatever standpoint it is viewed, and all are so disposed that the full extent of their beauty can be readily seen. Although no two persons see eye to eye in such matters, yet the most indifferent cannot fail to be struck with the high cultural skill shown in the huge specimens of *Caladiums*, *Crotons*, *Anthuriums*, *Alocasias*, *Dieffenbachias*, *Dracænas*, *Marantas* and others. This is but a tithe of the different subjects composing this remarkable group. A new *Dracæna* shown by Messrs. Veitch is *D. deremensis* Bausei, in which the white variegation is much clearer than in the variety *Warneckii*, which was given an award of merit last summer at Olympia.

Messrs. Stuart Low and Co. are showing a great variety of flowering and general decorative plants in the large tent. The Bottle Brush Flower (*Metrosideros floribunda*), or, as botanists now call it, *Callistemon salignus*, shows up brightly where associated with foliage subjects. Whether the plants are grown as bushes or standards, the brilliantly-coloured masses of flower are very telling, and are much admired. The variety *alba*, with white or creamy white flowers, is much less effective than the typical kind. Of flowering subjects shown by Messrs. Low are the pretty, graceful *Aotus gracillima* (with yellow Pea-shaped blossoms), *Fabiana imbricata* (that Heath-like member of the Potato family), *Hydrangeas*, *Heaths* of different kinds, *Carpenteria californica* (which is rarely seen flowering so freely in small pots), *Boronia polygalifolia*, *B. heterophylla*, *Correa cardinalis*, *Asclepias curassavica* and a fine group of the pretty little salmon-tinted *Azalea balsaminæflora*. As an edging plant is employed the Canary Island Lotus *peliorhynchus*, with its hoary leaves and scarlet bird's-beak-like flowers.

From Aldenham House Gardens come a delightful lot of *Pelargoniums*, in which occur many old-time favourites, especially among the scented-leaved kinds. They are all either original species or hybrids

therefrom, and from their uncommon appearance they appeal to many. Altogether about eighty sorts are shown, all being good, bushy specimens in pots 7 inches or 8 inches in diameter.

The huge specimens of scented-leaved *Pelargoniums*, which are trained in various ways, principally in screen shape, from Gunnersbury House (Mr. Leopold de Rothschild) form a notable and uncommon feature.

From Messrs. Fisher, Son and Sibray, Limited, Royal Nurseries, Handsworth, Sheffield, comes a fine group of *Crotons*, several of which have been raised by the firm. Of these last may be specially noted Duke of Portland (a medium-sized leaf with a large yellow centre), Mrs. J. Grace (which may be described as a yellow Flambeau), *Heathii pendula* (a seedling from *Heathii*, in which the foliage is

and *Streptocarpi*, all of their well-known strains, the plants showing evidence of good cultivation.

Messrs. Godfrey and Sons, Exmouth, Devon, exhibit a collection of show and decorative *Pelargoniums*, including all the best varieties in their respective classes. Their exhibit also contains a particularly fine form of *Amarantus tricolor*, whose leaves are as brightly coloured as the showiest blossoms.

In No. 3 Tent, Messrs. Cheal and Son, Limited, Crawley, are showing a collection of Dahlias in pots, an unusual exhibit for this time of the year. The varieties include Cactus, Pompon Cactus, singles and some members of the pretty Tom Thumb class.

The Hon. John Ward, Chilton, Hungerford, has a fine exhibit of *Streptocarpi* in large plants and showing a great variety in colour.

Messrs. James Carter and Co., Raynes Park, have a magnificent exhibit arranged in their well-known style. From a central stretch of turf of the most vivid green spring several beds of single *Petunias*, one of which, *Queen of Roses*, is the finest variety of that colour we have ever seen. Other choice varieties are *Purple Prince*, *Crimson King* and *White Pearl*, whose distinctive features are indicated by their respective names. The rich rose-coloured *Stock Queen Elizabeth*, and *Cineraria Brilliant Prize*, with huge blossoms, which serve to show the great contrast in the size of the blooms of this section compared with the small graceful blooms of the *stellata* class, are also shown. Being enclosed within light lattice-work painted pale green, the harsh lines of the huge tent and its supports are partially hidden by this, and a pleasing effect is produced thereby.

Begonias in No. 2 Tent form a gorgeous display. Messrs. Thomas S. Ware, Limited, Feltham, have a glorious lot of double-flowered varieties, including the magnificent pink form, *Lady Cromer*, of which a coloured plate was given in THE GARDEN for January 20 of the present year. Other varieties with huge, finely-formed and exceedingly beautifully-coloured blossoms are *May Queen* (bright salmon), *George V.* (brilliant orange salmon), *Margaret Guillim* (light

yellow), *Mary Pope* (white), *Captain Lafone* (soft pink), *Lady Ebury* (carmine rose), *King Edward VII.* (rich crimson) and *Mrs. Whitelaw* (vivid orange).

Messrs. Blackmore and Langdon, Twerton Hill Nursery, Bath, have a very fine collection made up of magnificent double and single flowers, as well as several varieties of a loose, drooping habit of growth, a character that eminently fits them for growing in suspended baskets. Particularly striking among the double kinds are *Mme. Tetrazzini* (orange salmon), *Irene Lambling* (vivid orange), *Mrs. Peter Blair* (white), *Miss Ethel Gill* (rose, a particularly upright flower), *Princess Victoria Louise* (pale salmon pink), *Mrs. W. L. Ainslie* (rich yellow), and *Violet Langdon* (pale pink, deep rose



A PATHWAY COVERED WITH ROSES IN MESSRS. HOBBIES' GROUP.

far more drooping than in the type), and *Victoria superba* (marked heavily with rich orange). Besides these are such well-known kinds as *Warrenii*, *volutus*, *Reidii* and *Lady Zetland*, which with some choice forms of *Cordyline australis* go to make up a very effective group.

The *Hippeastrums* from Sir George Holford, Westonbirt, Tetbury, make a gorgeous display, the range in colours being considerable. What is more, the Westonbirt *Hippeastrums* have long been famous for their vigour, so that specimens bearing two and three spikes of flower are in the majority.

Messrs. John Peed and Son, Roupell Park Nurseries, Streatham, show *Caladiums*, *Gloxinias*

edge). Two new varieties in this exhibit are Red Cactus and Rose Cactus. In these varieties the flowers are made up of a number of long petals, which give to a bloom very much the appearance of a Cactus Dahlia. These varieties are of a somewhat loose habit of growth, and in addition to their being good decorative plants, they are well adapted for growing in suspended baskets. Messrs. Blackmore and Langdon also make a speciality of flowers whose edges are remarkably fringed.

Messrs. Charles Turner and Sons, Royal Nurseries, Slough, show a varied assortment of greenhouse flowering plants, including specimen Azaleas, which, though well flowered, cannot, however, compare in size with the giants of old. Heliotropes, grown in various ways, and Pelargoniums of different sections also make a good display.

E. D. Preston, Esq., Kelsey Park Gardens, Beckenham, shows a large flowering specimen of *Phoenix Roebelini*.

Lord Northcliffe, Sutton Place, Guildford, exhibits a nicely-arranged group of decorative flowering plants, such as *Calceolarias* and *Cinerarias* of different sections.

Messrs. William Artindale and Son show, in Tent No. 2, a bank of finely-flowered examples of *Pæonia Moutan* (Tree Pæony), among the best being Queen Elizabeth (deep rose), Jeanne d'Arc (pink), and Mme. de Bugny (white, with violet centre).

Mr. West Neve, West Court, Bray-on-Thames, also shows a group of these showy Pæonies.

In the large tent Messrs. Robert Veitch and Son of Exeter show two remarkably handsome and most interesting *Calceolarias*. The first, known as *Calceolaria Veitchii*, is the result of a cross between the weak-growing *Calceolaria alba*, with white blossoms, and an albino seedling of Golden Glory. Strange to say, the new-comer is a far more vigorous grower than either of its parents, forming as it does quite a bushy specimen some 4 feet to 5 feet in height, and flowers in great profusion; the colour of the blooms is of a milk white tint. This remarkable *Calceolaria* has proved to be hardy at Exeter, and comes quite true from seed. The second variety, The Bronze Age, is of free bushy growth, and bears in great profusion rich bronzy crimson flowers.

Messrs. H. Cannell and Sons, The Home for Flowers, Swanley, Kent, are staging an extensive group at one end of the huge tent. Against a background of climbing Roses are disposed a great number of choice flowering plants, including *Calceolarias*, among others being the bright yellow *Calceolaria Clibranii*, Marguerite Mrs. F. Sander, *Hydrangea arborescens grandiflora*, choice Pelargoniums, including some members of the Curious Cactus race, and a very promising double-flowered member of the Ivy-leaved section called Vicar of Shirley. The flowers of this are deep scarlet, with a dark blotch in the centre of each segment. The variety Salmon Paul Crampel, which has already become a favourite, is also well shown. The flowering Cannas are well worthy of the reputation Messrs. Cannell have so long enjoyed, and the bank of flowering examples forms quite a mass of colour. A few of the most striking are D. H. Thorn (crimson), C. Haussmann (amber), Gladiator (gold, spotted red), Prefet Bargeton (deep amber), John Farquhar (salmon pink), Frau G. Siebert (yellow, lined crimson), and J. B. Van der Schoot (one of the best spotted forms). A notable feature is furnished by quite an extensive group of *Phyllocactus German Empress*, a very pretty pink flower.

Mr. W. H. Page, Tangley Nurseries, Hampton, is showing a remarkably brilliant group of Zonal Pelargoniums, consisting mainly of his three varieties, which have aroused a good deal of attention of late, namely, that rich-coloured variety His Majesty, the paler-tinted Fiscal Reformer and Winter Cheer. Each variety is disposed in a large hemispherical mass, and the blaze of colour is a striking one.

Messrs. Philip Ladds, Swanley Junction, Kent, also exhibit a large group of the finest market varieties, including such comparatively new kinds as Salmon Paul Crampel, and the still newer pink-flowered Ambrosia.

Leopold Salomons, Esq., is showing, towards the central portion of the large tent, a highly decorative group, the central portion consisting of blue Hydrangeas surrounded by well-grown and varied forms of *Schizanthus*, with an edging of Maidenhair Fern, alternated with the pretty purplish blue-flowered *Torenia Fournierii*.

The Rev. A. T. Boscawen, Perranwell, Cornwall, has a small exhibit, but in the opinion of many it

early days the improvement is most striking. Cannas, too, of the large flowering race are also largely shown, while the *Cinerarias* are innumerable in their variety. In the raising of *Cinerarias* Messrs. Veitch do not follow any hard-and-fast line, but carry out experiments with different species, and thus obtain varied results. One of their latest is Pompadour, with striped florets, but it does not appeal to the general public as markedly as do some of the others. The Cactus race are much admired, while the possibility of a clear yellow *Cineraria* is suggested by the variety *flavescens*, a cross between *Senecio auriculatissimus* and *C. Feltham Beauty*. The brilliantly-coloured flowers of *Kalanchoë flammea* stand out in a very conspicuous manner, as also do those of the new *Kalanchoë Excelsior*, for which Messrs. Veitch obtained an award of merit two years ago. This list might be indefinitely extended, but one or two items must not be passed over. They are *Clianthus Dampieri*, with its richly-coloured blossoms; *Elæocarpus dentatus*, an Australian shrub with prettily fringed bell-shaped blossoms;



CALCEOLARIAS IN MESSRS. E. WEBB AND SONS' EXHIBIT OF GREENHOUSE FLOWERS.

is one of the most interesting features of the show. It consists of three marked forms of the Manuka of Australia and New Zealand *Leptospermum scoparium*, a fairly well-known twiggy bush with small white Myrtle-like flowers. The three varieties shown are *Chapmannii*, of an upright habit of growth with rosy red flowers; *Boscawenii*, a loose-growing plant with flowers larger than those of the type, and in colour white with a red centre, the buds being red. The third is *Leptospermum scoparium Nichollii*, whose flowers are of a rich ruby red, quite a startling colour to those acquainted only with the common kind. Hardy in the favoured parts of the country, these *Leptospermums* would form grand conservatory plants elsewhere.

Messrs. Veitch exhibit in Tent No. 3 a charming collection of representative flowering plants of the different classes for which they have long been famous. *Streptocarpuses*, or Cape Primroses, are shown in blocks or masses of nearly every imaginable colour, and to those who knew them in their

Exacum macranthum, whose rich purple flowers are always admired; and *Gloxinias* in choice variety. Some twenty-five *Fuchsias* present quite a unique spectacle, each plant having several shoots trained to the angle of the roof of a greenhouse, thus showing their value for clothing the rafters of such structures or for similar purposes. The varieties grown in this striking manner are Clipper, Final, General Grenfell, Lustre, Mrs. Marshall, Mrs. Todman, Olympia and The Shah.

Miss Troyte Bullock, North Coker House, Yeovil, Somerset, has in No. 2 Tent a delightful series of Pelargoniums, mainly scented-leaved forms. Many of them are true species, while others are old hybrids whose early history is in several cases now lost. As this collection is made up of 126 distinct forms, we should say that such a collection must be almost, if not quite, unique.

In No. 3 Tent, Messrs. William Artindale and Son of Sheffield show a large and varied collection of the very best forms of *Primula obconica*, whose blooms vary in colour from white to rich carmine

crimson. The pretty white-flowered *Abutilon Sawitzii* has a very nice effect arranged with these *Primulas*.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, have in the same tent a very striking series of the newer hybrid forms of *Gerbera*.

From the gardens of the Marquis of Salisbury, Hatfield, comes a pleasing group of the pretty little violet-coloured *Saintpaulia ionantha*, over which are arranged a few light Palms and plants of the graceful *Cyperus laxus*.

From Tresco Abbey comes one of the rarities of the show, namely, a flowering example of the Andean *Puya chilensis*. From a mass of thick Aloe-like leaves is pushed up a sturdy 6-foot spike, the upper portion of which consists of a crowded head of curious green flowers with yellow stamens. This *Puya* is perfectly hardy at Tresco.

Mr. Bruce, The Nurseries, Chorlton-cum-Hardy, Manchester, whose name has for a very long time been associated with the culture of the different *Sarracenias*, has an extensive group consisting mainly of these fascinating plants, associated with Palms and Ferns, and some pleasing examples of *Nertera depressa*. The *Sarracenias* are now grown to a much less extent than they formerly were.

An addition to the tuberous *Begonias* previously mentioned is a charming collection staged by an

Vuillermet (rich pink, much serrated), Ronsard (a striking flower, in colour rich pink, light centre, toothed at the edges), La Perle (white serrated), Lillie Moullière (a bright rose flower with a light centre, very pretty) and President Fallières (a huge truss of bright pink flowers).

Another collection, shown by M. Fargelon, contains some particularly good examples of blue-flowered forms.

M. George Arends, Ronsdorf, Bei Barmen, Germany, is showing a striking and varied assortment of *Primula obconica*, of which, by the way, there are many notable examples in the present exhibition.

In the Belgian Section, M. Van Houtte, Ghent, is exhibiting a choice group of Indian *Azaleas*, consisting of some of the finest varieties. Particularly noticeable are Jean Peeters (rich carmine), Roi des Blancs (white), Remembrance of Stephenson Clarke (vivid red), Flambeau (intense ruby red), Apollo (light scarlet), Louise Cuvelier (light striped), Professor Wolters (salmon rose) and Temperance (a very distinct lilac flower).

ORCHIDS.

It is true that we had heard glowing reports concerning the Orchids to be shown, but such reports were quite inadequate and failed to do justice

the *Cattleyas*, *Cymbidiums* and *Phalænopsis*. *Vanda teres gigantea*, *Dendrobium dalhousiana* and *Cœlogyne pandurata* are conspicuous in this meritorious group.

Messrs. Stuart Low and Co.'s group in Class 68, species only, is a comprehensive one, and contains representatives of most species worth growing. Just under one hundred species are to be seen in this collection alone.

By a consensus of opinion the Orchid Tent is one of the features of the exhibition; it is heated throughout by an efficient system of hot-water pipes.

Messrs. Sander and Son's extensive group occupies a run of about one thousand feet of staging, and contains some of the most beautiful Orchids in cultivation. It will be noticed that *Phalænopsis* and *Renanthera*, white and orange scarlet respectively, contrast in a most pleasing manner, while *Cattleya Schrödera*, *Odontoglossums* and *Dendrobiums* in variety are shown in the height of perfection and in great profusion. In the centre-piece of this group will be observed a bold display of *Miltonia vexillaria* Empress Augusta; it is a conspicuous variety with large, deep pink-coloured flowers. The group is staged in a masterful manner, each plant shown to the greatest advantage against a background of Palms. The handsome yellow *Anguloa Clowesii* and the pure white *Dendrobium Dearii* are both conspicuous in this collection.

Messrs. Mansell and Hatcher are the only competitors in Class 66 for a group not exceeding 500 feet, and this contains a grand lot of *Renanthera imschootiana* and *Cattleya Mossiæ* and *Lælio-Cattleya* hybrids in variety. A new *Odontioda* named *Cleopatra* is worthy of special note, also a spotted *Anguloa*, a probable new species of doubtful origin. Two magnificent plants of *Vanda teres*, each carrying seventeen spikes, reflect the highest praise upon the cultivation.

The group by Mr. Ogilvie, containing *Cattleyas*, *Thunias*, *Odontoglossums* and *Dendrobiums*, and covering a space 500 feet in length, is worthy of the highest praise; and the same may be said of the group by Mr. Harry Dixon of Wandsworth Common, which, by the way, contains a wonderful specimen of the Spider Orchid (*Oncidium phymatochilum*); it has four floriferous spikes carrying in all 320 flowers.

Messrs. Armstrong and Brown in Class 83 have a well-staged group, in which *Cymbidiums* and *Cattleyas* form the leading feature.

The comparatively new race of Orchids known as *Odontiodas* forms the chief feature of a wonderful collection sent by Sir Jeremiah Colman, Bart. One plant of *Odontioda Bradshawia* alone carries over one hundred flowers, and the whole group of them originally came from one seed-pod raised in 1906. We particularly ask our readers to look out for *Odontioda Bradshawia* variety Vivid; it is a very beautiful and unusual scarlet variety. The Gatton Park variety is also worthy of special note, and it is one that secured a first-class certificate at the Temple Show last year. *Odontiodas Vuylstekeæ* and *Lady Colman* are two of the most valuable in the collection. But other Orchids are to be seen in this group, and among them we observed *Odontoglossum* Queen of Gatton, *O. Rolfæ* and *O. crispum* variety Mary Colman, *Oncidium pulchellum* and *O. splendens*, *Miltonia lœvis*, *M. vexillaria magnifica* and *M. v. Empress Augusta*, *Lælio-Cattleya* G. S. Ball, L.-C. Ruby Gem and L.-C. Phœbe, *Lælia purpurata gloriosa* and *L. tenebrosa*, *Cattleya Mendelii* and a host of others, including *C. Fascinator* and *C. Mossiæ* in variety.



THE CENTRE OF LIEUTENANT-COLONEL SIR GEORGE HOLFORD'S GROUP OF ORCHIDS, AWARDED THE KING'S CUP FOR THE BEST EXHIBIT IN THE SHOW.

amateur, namely, F. Davis, Esq., Woolas Hill, Pershore, Worcester. This collection contains some very fine forms.

Yet another group of *Hippeastrums*, besides those previously noted, is contributed by W. B. Kenrick, Esq., Edgbaston, Birmingham. They are magnificently grown and the flowers of large size and good shape, the rich-coloured blossoms being particularly good.

FOREIGN EXHIBITS.

The number of stove and greenhouse plants among the foreign exhibits is decidedly limited; certainly not nearly as many as one might expect to have seen.

Of the French Section, the most striking group of this class is a collection of new and newer varieties of *Hydrangea*, shown by M. Moullière, one of whose older varieties, Mme. Moullière, has already attained a considerable amount of popularity in this country. Of the numerous examples, the following are especially noticeable: Directeur

to the magnificence and splendour of even the first glimpse of the interior of the Orchid Tent. Here are to be seen Orchids from all parts of the country, and such a display has never been excelled for brilliance and quality. It is worth travelling far to see the magnificent group sent by Sir George Holford. *Cattleyas* in the richest hues of crimson and mauve, and a multiplicity of varieties of *Dendrobiums*, *Cymbidiums* and *Lælio-Cattleyas*, are overhung with arching sprays of golden yellow *Oncidiums* against a background of stately Palms. It is a perfect mass of flowers, remarkable alike for quality and quantity, and reflecting the highest credit upon Mr. Alexander, the able grower.

Visitors must not fail to notice the grand lot of *Vanda teres* shown by Mr. Leopold de Rothschild, Gunnersbury Park Gardens (gardener, Mr. Reynolds).

Mr. Gurney Fowler is showing a creditable group of *Odontoglossums*, *Phalænopsis* and *Cymbidiums*, also very choice varieties of *Odontioda*.

Messrs. Cypher and Son's group, occupying a run of 400 feet, is remarkable for the excellence of

But this is not the only group sent from Gatton Park, for Orchids of botanical interest are likewise shown. The public who are seeking weird varieties and curiosities, or plants carrying minute flowers, will find them represented by the following: *Bulbophyllum tremulum*, *B. barbigerum*, *Masdevallia xipheres* (with its sensitive lip which gives a jump soon after being touched), *M. o'brieniana* (very similar to the curious *M. Simula*, commonly known as the Partridge in the Grass from the difficulty of discovering the flowers among the foliage), and *Pleurothallis macroblepharis*, or the Gnat Orchid. These are all in the botanical group, Division 3, Class 86. An Orchid to be specially noted is *Bulbophyllum virescens*, with its exquisite colouring. Another of the plants, the peculiar *B. Lobbii*, with an ever-moving lip, is sometimes called the Lady Orchid, suggestive of a constantly wagging tongue. Mr. J. Collier, the Orchid-grower, deserves the highest praise for these interesting groups.

Words fail to express in adequate terms the magnificence of the large group by Messrs. Charlesworth and Co. of Hayward's Heath. This group comprises *Miltonias* remarkable for their size, colour and general good quality; *Cattleyas* and *Odontoglossums* of the very highest order; while an imposing group of *Odontiodas* in richest hues of orange and crimson, intermingled with bold white spikes of *Phalænopsis*, is most effective and forms a grand centre-piece to a truly magnificent display.

FERNS.

Just within the main entrance on the right-hand side will be seen one of the finest groups of Ferns one could ever wish to see. It is by Messrs. H. B. May and Sons, and comprises all the greenhouse Ferns worth growing, together with choice British species and varieties. No less than a 2,500 feet run of space is taken up by this colossal collection. Tree Ferns are dotted here and there in this huge bank of greenery. The Stag's-horn Fern is freely used, and magnificent specimens of *Davallia solida superba*, *Polypodium Knightæ*, *P. Mayii* and *P. Vidgenii* (an old species from Queensland reintroduced) are to be seen. No fewer than thirty species and varieties of Filmy Ferns under bell-glasses are included in this wonderful collection.

Messrs. J. Hill and Son, Lower Edmonton, are represented by two groups of grand rare exotic Ferns, including *Polypodium Knightæ*.

Blechnum [*braziliense*, *Platycerium Veitchii*, *P. grande* and *P. Willinkii*; also *Polypodium quercifolium*, *Dicksonia* (*Cyathea*) [*Barometz* and *Cyrtomium Rochfordii*.

A choice collection of exotic Ferns is shown by Messrs. James Veitch and Sons, Limited. Among

the most interesting are *Adiantum farleyense* and its near ally *Glory of Moordrecht*, *Asplenium Nidus*, *Davallias fijiensis elegans* and *robusta*, *Osmunda palustris*, *Platycerium Alciorne*, *grande* and *Veitchii*, *Polypodium Knightæ* and *Pteris Childsii*.

A fine bank of hardy Ferns from Mr. Amos Perry is to be seen in No. 4 Tent. The group comprises a fine assortment of Royal and Hart's-

greenhouse Ferns in No. 6 Tent. *Adiantum farleyense* and *Nephrolepis Marshallii*, both in thumb pots, are remarkably good. Visitors should note the gold and silver Ferns (*Gymnogrammas*), the Climbing Fern, or *Lygodium japonica*, and the Coral Fern, *Gleichenia longipinnata*, and its near relative *G. flabellata*.

Mr. W. A. Manda, South Orange, New Jersey, U.S.A., is showing some magnificent specimen Ferns

in Class 94, for 200 square feet. Among his best plants are *Polypodium mandaianum* (new and sterile), *Nephrolepis President Roosevelt* and *N. viridissima*. *Polypodium mandaianum* is also well shown in the class for specimen Ferns. It is a novelty worth noting, with handsome fronds six feet and more in length. These Ferns look none the worse for their journey of 3,000 miles.

TREES & SHRUBS.

Quite remarkable and most interesting is the large group of new Chinese plants collected by Mr. E. H. Wilson. This group is set up by Messrs. James Veitch and Sons, Limited, Chelsea, S.W., and covers no fewer than 2,000 feet. Vines are displayed in charming variety. *Rubus flagelliformis* is exhibited, and is one of the most beautiful of the Chinese climbing plants. Hollies are also most noteworthy, *Ilex Fargesii* and *I. continentalis* both being conspicuous for their distinct character. *Ilex Pernyi* is another unique variety. The Chinese Walnut (*Juglans cathayensis*) is shown with young fruits just developing. There are some beautiful *Berberis* in this group of novelties, those worthy of notice being *B. Gagnepainii* and *B. Wilsonæ*, which is covered with coral red berries in the autumn. A beautiful evergreen *Berberis* is *B. veruculosus*—this is to be seen in excellent condition. *Astilbe Davidi* and *A. grandis* are two fine plants that are just developing their spikes of blossom. The foregoing are just a few of the plants that are destined to add to the attractiveness of the garden and landscape in the near future.

Trees and shrubs are shown in a charming manner by Messrs. Fisher, Son and Sibray, Limited, Handsworth, Sheffield. This firm have an excellent reputation for the better subjects under this heading, and their present exhibits serve to maintain their reputation. A group of beautiful *Acers* was much admired; but their chief exhibit is at



ODONTIODA QUEEN MARY, A BEAUTIFUL NEW ORCHID SHOWN BY MESSRS. CHARLESWORTH AND CO.

tongue Ferns, also *Polypodiums*, *Athyriums* and *Polystichums*. Among the best plants are *Athyrium Filix-fœmina todæoïdes*, *Adiantum pedatum*, and *Polystichum angulare frondosum Lowii*.

Mr. H. N. Ellison, West Bromwich, is showing an admirable collection of *Adiantums* and other

the Embankment end of the large tent. Here are displayed in wonderful variety many of the more interesting and better subjects, such as Golden Oaks, Japanese Maples, large specimens of avenue trees, such as Limes, Norway Maples, Golden Elms, Purple and other Oaks, *Kæmpferia* and Maples in variety

Exceptionally fine are *Dimorphanthus alba* and *D. aurea*, which give one the impression of making large and handsome trees. A groundwork of *Rhododendrons* adds to the effect of this fine group.

Clipped trees and bushes are always a feature at the great shows of this country, and on the present occasion they are well done. One collection represented peacocks, tables, crowns, stags and numerous other devices in well-grown specimens of Box and Yew; and in the same group beautiful Bays are exhibited in the pink of condition in standard, pyramid and other forms of culture. The foregoing come from Messrs. Jackman and Sons, Woking, Surrey, who are renowned for their topiary work.

Among the most noteworthy features of this memorable exhibition are the magnificent groups of *Rhododendrons*; all the leading specialists are represented. Exceptionally beautiful are the *Rhododendrons* from Messrs. John Waterer and Sons, Bagshot, Surrey. Their group covers an immense area, and represents these showy plants at their best. Pink Pearl is finely shown, as are the newer *Coronna* (a beautiful flesh pink sort), *Duchess of Connaught* (marked green on white ground), *Mrs. Holford* (a very beautiful rosy red), *W. E. Gladstone* (a very noble-looking flower), *Cynthia* (a deep rose), and *Doncaster* (a brilliant scarlet-crimson sort, bearing a most profuse display of blossoms) are among the best. Standards and bush specimens are charmingly displayed, and, as a whole, the exhibit is most comprehensive.

A bright and pretty group of *Rhododendrons* is that from Messrs. Fletcher and Brothers, Otter-shaw, Chertsey, *Helen Paul* (pale flesh pink), *John Bennett-Poë* (rich rose) and *Duke of York* (flesh pink, with large individual flowers) being the more novel sorts among an interesting collection of freely-flowered plants.

A remarkably fine collection of gorgeous plants of the hardy *Azaleas* is one of the special features of this great show. *Azalea mollis*, *A. m. sinensis*, *A. rustica*, *A. ponticum* and *Ghent Azaleas* are represented by freely-flowered plants in wonderful variety. Of *A. mollis sinensis*, variety *Apple Blossom*, *Prince of Orange* and *Dr. Reichenbach* are magnificent; of the *Ghent Azaleas*, variety *occidentalis* and *o. Exquisita* (new) are superb, besides an immense array of glorious things far too numerous to mention. This group is set up by Messrs. R. and G. Cuthbert, Southgate, Middlesex, and the arrangement and composition of the exhibit leave nothing to be desired.

A pretty group of hardy *Azaleas* is also shown by Messrs. Cutbush and Son, Highgate and Barnet. Profusely-flowered specimens of many varieties of all the well-known species and hybrids are in evidence in a charming group.

Hardy *Azaleas* from Messrs. J. Veitch and Sons make a grand bank of colour, the plants being large, freely flowered and beautifully fresh. A grand bank of *Lilacs* from this firm creates a most cool and refreshing effect. The plants are fresh, clean and profusely flowered, and there is great variety.

Messrs. Hugh Low and Co., Enfield, have a capital representation of the *Bottle Brush Tree*, in good form and condition, set up in their large and comprehensive group at the north end of the big tent. Both the original and the white forms are exhibited in standard and bush plants, as well as in pyramidal form.

In the Dutch Section hardy *Azaleas* are most artistically grouped by Messrs. M. Koster and Sons, Boskoop, Holland. Our Continental friends

have the advantage over English exhibitors of being able to set up their plants with real artistic effect, and the creation made by this firm is distinctly pleasing and almost fascinating. The colours of the flowers are superb, and this effect is heightened by the association of beautiful deep-coloured Japanese Maples. *Queen Alexandra*, *Falstaff*, *King Lear*, *T. C. van Tol*, *Ellen Cuthbert* and *Laertes* are all very beautiful.

A large and comprehensive collection of *Lilacs* and *Roses* are exhibited in the Dutch Section by the growers of these subjects at Aalsmeer, Holland, representing the products of the growers in this locality. The *Lilacs* are set up in very large gilded baskets in a most artistic way, and the



LEPTOSPERMUM SCOPARIUM NICHOLII,
SHOWN BY THE REV. ARTHUR T.
BOSCAWEN. (See page 261.)

group, as a whole, is charming in every way. *Lilac-coloured* sorts are *Charles Dix*, *President Grevy* and *Souvenir de Louis Spath*. White sorts are *Marie Legraye* and *Marie Lemoine*, the latter being a beautiful double variety.

Messrs. John Jefferies and Son, Limited, Cirencester, stage a very excellent group of conifers in wonderful variety in a space 500 feet square. The specimens have been lifted, and are set up in baskets. Many individual specimens merit high commendation, and the group embraces numerous choice and beautiful examples of coniferous plants. *Abies Veitchii*, *A. pungens*

glauca kosteriana pendula, *A. arizonica*, *A. pungens glauca*, *Cupressus lawsoniana gracilis*, *C. l. pyramidalis alba spica*, *Cedrus Deodara aurea*, *Cupressus lawsoniana Olbrichii*, *Picea nordmanniana*, *Abies albertiana*, *Thuya Lobbi siddingtonensis*, *Sciadopitys verticillata*, *Taxus elegantissima*, *Cupressus lawsoniana filiformis elegans*, *C. l. lutea gracilis* and *C. l. Stewartii* are some of the more noteworthy specimens of these wonderful trees.

In a competitive class for twenty-five conifers, distinct, *Taxads* excluded, Messrs. John Waterer and Sons have a very beautiful exhibit. The group is set up under the trees in the main avenue, and the plants are most attractive. The better specimens are *Abies concolor*, *A. lasiocarpa*, *A. pectinata pendula*, *A. nobilis variety glauca*, *A. nordmanniana*, *Juniperus virginiana glauca*, *Tsuga Sieboldii*, *T. mertensiana*, *Pinus contorta*, *P. Coulteri*, *P. muricata*, *Cupressus lawsoniana variety densa gracilis*, *Picea pungens*, *P. p. orientalis*, *P. polita* and *Abies sachalinensis*.

Bays as shown by Messrs. James Veitch and Sons, Limited, Chelsea, are exhibited in a manner never seen before. Two triangular corners on the lawn outdoors serve to display an extremely large assortment of specimen trees and bushes growing in tubs, and the plants are all in the pink of condition. Pyramid bushes and large and medium sized mop-headed or standard specimens are disposed on the grass in a charming way, displaying the beauty of this subject most effectively.

Ornamental trees and shrubs are charmingly set up by Mr. L. R. Russell of Richmond and Tunbridge Wells. A secluded spot in the outdoor garden, with a natural setting of dark foliage, displays these variegated and ornamental trees and shrubs in a manner seldom seen at these great shows. Here are to be seen beautiful specimens, showing the possibilities of the subjects when planted in their permanent positions. A few of the most noteworthy plants are *Vitis* in variety, Japanese Maples, *Ceanothus*, *Cytisus*, American Maples, Bamboos and numerous other ornamental trees and shrubs. This fine group is enhanced by a grand collection of *Tree Ivies* in grand condition, the colour being most noteworthy. *Hedera dentata variegata* is a beautiful Ivy that stands out in significant fashion. An imposing group of *Bambusa*, *Arundinaria* and *Phyllostachys*, set up by the same exhibitor, is a noteworthy exhibit. The graceful and decorative value of these plants is borne in upon the visitor as each subject in the group is inspected in turn, and there is little doubt such an exhibit must tend to make the Bamboos, &c., increasingly popular. The group comprises an area of 300 feet.

Messrs. W. Cutbush and Sons, Highgate and Barnet, have been for so long associated with the development of topiary work that their large and comprehensive display of clipped trees and shrubs comes as no surprise. The specimens are in a beautifully fresh condition, and they include Box in fresh green growth, Yews and Bays, peacocks, pheasants, anchors, stags, ships, tables and numerous other devices being remarkably well done.

Superbly fine is the group of Japanese Maples from Messrs. John Waterer and Sons, Limited, Bagshot. Handsome individual specimens, as well as dainty plants, are represented in this noteworthy exhibit of 300 square feet in the competitive classes. Exceptionally fine specimens

of *Acer palmatum dissectum*, *A. p. purpureum* and *A. japonica aureum* are most conspicuous. *A. crataegifolium*, *A. septemlobum* and *A. palmatum lutescens* are also very fine. A non-competitive group from the same firm of about 4,000 feet, representing *Kalmias*, *Viburnums*, *Rhododendron odoratum*, Thorns, Hollies, standard and pyramid, conifers in great variety, besides Maples and numerous other noteworthy plants, are in evidence. *Retinospora recta*, *R. obtusa densa aurea* and *R. filifera* are three magnificent conifers.

A group of flowering and foliage plants arranged for effect, to cover a space not exceeding 400 square feet, found two entrants, which, as a whole, was a beautiful diversion from the many other subjects arranged in close proximity. The group from Mr. R. C. Notcutt, The Nursery, Woodbridge, Suffolk, was a capital effort, although somewhat too crowded to do justice to the numerous plants set up. Flowering plants largely preponderated, the most conspicuous and noteworthy of these being *Oleari astellulata*, *Viburnum plicatum*, *Cytisus prostrata grandiflora*, *C. andreana* and *C. andreana prostrata*, *Spiræa confusa*, *Fabiana imbricata*, *Philadelphus Bouquet Blanc*, *Rhododendron Pink Pearl*, *Kalmia latifolia*, *Deutzia Lemoinei* and *Cytisus purpureus incurvatus*; of the foliage plants, *Acer palmatum rosea marginata*, *Cornus mas elegantissima* and *Prunus Pissardii*.

In the same competition as the foregoing Messrs. Fisher, Son and Sibray, Limited, Handsworth, Sheffield, set up a very dainty and artistic group. The disposition of the different subjects leaves nothing to be desired. Of the foliage plants the more noteworthy are *Ginkgo biloba*, *Cotoneaster Franchetti*, *Dimorphanthus aurea* and *D. alba*, *Rhododendron Countess Fitzwilliam*, Japanese Maples in variety, Japanese Vines, Tree Ivies, and the new *Aucuba japonica* Fisher's variety, all of which combine to make a beautiful group in conjunction with flowering plants of a diverse kind. The artistic disposition of the plants in this group is very noticeable, and the effect is most pleasing.

Outside, near to the Administration Offices, Messrs. W. Fromow and Sons, Chiswick, W., have a group of hardy trees and shrubs, mainly Japanese Maples. There is much to interest lovers of beautiful trees and shrubs in this group, and the disposition of the subjects is effectively carried out.

A group of hardy flowering trees and shrubs is shown outdoors near to the area devoted to rock gardens. This is set up by Messrs. Jackman and Son, Woking, and represents a great variety of plants that should succeed well in the neighbourhood of large towns. Among other useful subjects are Tree Ivies, Box, Yews, Hollies, Elders, Maples, Berberis, *Prunus Pissardii*, *Viburnums*, *Laburnums* and many useful plants for gardens in smoke-laden areas.

Superb aptly describes the group of conifers charmingly disposed by Messrs. John Waterer and Sons, Limited, Bagshot. This is a most praiseworthy exhibit, and includes a thoroughly representative series of plants. The grouping is especially effective, and under the cool and shade of the trees of the main avenue this display of 500 feet of these beautiful subjects looks most effective—*Retinospora obtusa Crippsii*, *Thuya occidentalis* variety *Douglasii*, *Cupressus lawsoniana* variety *Wissellii*, *Juniperus virginiana* variety *tripartita*, *Retinospora obtusa nana aurea*, *Abies arizonica*, *Thuya orientalis* variety *semperaeurescens*, *Tsuga mertensiana*, *Pinus Cembra*, *Abies Veitchii*, *Picea Pinsapo* and *P. Omorika*, besides a host

of choice things. The same firm staged a charming group of variegated, golden, silver and glaucous conifers in a space 250 feet square. The specimens in this instance are most attractive and beautifully diversified in their character. This is to be seen in the main avenue outdoors under the trees. Among other noteworthy specimens are the following: *Tsuga canadensis* variety *alba spica*, *Juniperus communis* variety *alpina aurea*, *J. japonica* variety *aurea*, *Pseudotsuga Douglasii* variety *glauca elegans*, *Cupressus nootkatensis* variety *albo-variegata* and *C. pisifera* variety *aurea*.

Four hundred feet of Hollies from Messrs. John Waterer and Sons, Limited, Bagshot, make a magnificent exhibit. In this collection are many species and beautiful varieties of the originals. The group is displayed in the main avenue under the trees, and is most effective. *Ilex latifolia*, *I. Pernyii*, *I. cornuta*, two fine specimens of the species of Silver Weeping and Golden Weeping *I. Wilsonii*, *I. Mundayii*, *I. Aquifolium* variety *Golden King*, *I. crenata*, *I. c.* variety *aurea* and *I. Aquifolium* variety *Watereri*, better known as Waterer's Golden Holly, are shown. Of the green-

which is seen to advantage under the subdued light of the trees in the main avenue. *Rhododendron Pink Pearl*, hardy Azaleas and *Ceanothus divaricatus* are to be seen well disposed among a host of beautiful hardy foliage plants. *Pittosporum eugenoides*, *Elæagnus japonica macrophylla*, *Cedrus Deodara* variety *aurea*, *C. D. alba spica*, *Acer palmatum sanguineum* and *Griselinia macrophylla* are some of the more interesting subjects in this exhibit.

Messrs. G. Paul and Son, Cheshunt, Herts, conceived the excellent idea of grouping a number of competitive classes together for effective purposes, and in this they are singularly successful. In this wonderful group there are 400 square feet of Hollies, twelve Taxads, two Portugal Laurels, twenty large specimen Hollies, each of which varies from 8 feet to 13 feet in height, and some are 7 feet in diameter. Noteworthy specimen Hollies are Weeping Silver (a splendid standard), *Ilex tortuosa* and Waterer's Gold (fine bush plants). The Yews are also very fine.

A most fascinating collection of clipped trees and shrubs from Messrs. J. Piper and Son, Bayswater, calls for special mention. Birds in variety,



AZALEAS SHOWN BY MESSRS. R. AND G. CUTHBERT.

leaved varieties, additional sorts are *I. doningtonensis*, *I. ferox*, *I. Sheppardii* and *I. camelliaefolia*, all of which contribute to a group that is somewhat unique.

Messrs. Liberty and Co., Limited, have a most interesting exhibit of Japanese ornaments and dwarf trees in wonderful variety in the main avenue under the trees. Here are to be found Japanese ornaments for the garden in stone, bronze and Bamboo, besides quite a good collection of their dwarf trees, which have become so popular of late. This exhibit is meant to illustrate the accessories of a Japanese garden, and this it does most effectively.

A group of conifers arranged on a space of 500 square feet is shown by Messrs. Jackman and Son, Woking, Surrey, and this embraces a most charming and beautiful selection of plants in tubs in splendid condition. The disposition of the different subjects leaves nothing to be desired. As a collection of coniferous subjects the group is splendidly representative, many noteworthy examples being in evidence.

Messrs. Dicksons, Limited, Chester, have a large, clean and bright group of hardy trees and shrubs,

spiral Yews, hoops, baskets, vases, a loving-cup, a dog and numerous other devices are displayed. The whole collection is enclosed in a fence of live Box, the round pillars and upright staves being represented in a unique manner. This group is in the competitive class, and is arranged outdoors.

In addition to a charming group of *Rhododendrons* mentioned elsewhere, Messrs. Jackman of Woking, Surrey, have a series of groups of other subjects at the north-east end of the big tent. Here are to be seen artistically-arranged exhibits of Clematises, hardy Azaleas, a group containing *Kalmias*, *Hydrangea*, *Viburnums*, *Weigela*, *Philadelphus*, *Spiræas*, *Andromedas*, *Cytisus*, *Laburnums*, *Phlomis*, *Escallonia* and *Ceanothus*, and another group of herbaceous plants. The group of Clematises has an especial cooling effect; the plants are in excellent condition and bear beautiful blossoms. Lady Northcliffe, Mary Boilett, Lord Neville, Jackmanii rubra, Nellie Moser, Belle of Woking (double), King Edward VII. and Mrs. Hope are among the best sorts in evidence.

A wonderfully varied collection of new trees and shrubs is exhibited in the large tent by the Hon. Vicary Gibbs, Aldenham House, Elstree,

Herts. This group promotes considerable interest, as the plants were raised from seeds collected by Mr. E. H. Wilson during his last two journeys to China. The seeds were gathered from trees and shrubs growing at high altitudes, so that their fitness for cultivation within the United Kingdom is practically assured owing to this fact. Notable specimens among this large and varied collection of plants are *Cedrella sinensis*, *Ailantus vilmoriniana* and a new *Paulownia*. The plants are shown in pots, and many of the *Rubuses* are less vigorous than when growing in the open. Other noteworthy shrubs in this exceedingly interesting collection are *Acer Henryi*, *A. Davidii*, and *A. Wilsonii*, a capital trio. A beautiful climber, now fairly well known, is *Actinidia sinensis*. Distinct and attractive *Alders* are *Alnus lanata* and *A. cremastogyne*. Other subjects, such as *Berberis*, *Deutzia*, *Cotoneasters*, *Corylopsis*, *Rhododendrons*, *Ribes* in variety and a beautiful series of ornamental Vines, are included in this large and comprehensive group, for each of which there are many uses.

HARDY HERBACEOUS PLANTS AND ALPINES.

This section is exceedingly well represented in all classes, not a few of the exhibits proving of great excellence. In the large non-competitive class of some 300 feet in extent, no exhibitor brought or staged such an admirable lot of alpine and hardy plants generally as Sir Everard Hambro, K.C.V.O., Hayes Place, Hayes, Kent (gardener, Mr. J. Grandfield), the collection comprising one of those rich and extensive displays of alpine vegetation which have made the Hayes collection famous in many places where these things are grown. Singularly rich in mountain plants generally, we direct particular attention to such rarities as *Erinacea pungens*, *Jankaea Heldreichii*, *Asperula suberosa rosea*, *Primula Veitchii*, *P. cockburniana* and other choice species. *Oenothera ovata* was a charming plant in this group, while the almost endless array of *Saxifrages* and *Androsaces* added lustre and greatness to Hayes and its associations with alpine plants.

In No. 2 Tent Messrs. Wallace and Co., Colchester, have arranged a delightful lot of *Ixias*, *Sparaxis*, *Brodiaeas*, *Liliums* and *Calochorti*, the latter embracing a delightful array of colour and form in these too rarely seen Californian bulbous plants. The finest plant in the group in all probability was *Lilium myriophyllum*, a delightful trumpet Lily from China with very narrow leaves.

In the group from Messrs. Thomson and Charman, Bushey, are to be seen excellent examples of *Saxifragas*, *Primulas* and the not ineffective *Mimulus* radicans.

In this same tent Messrs. Artindale and Sons, Sheffield, have a charming lot of things, well grown and pleasingly arranged. The examples, too, for the most part, were in specimen form, and in this way the plants told their own tale. *Cypripediums* of the hardy kinds, as *C. pubescens*, *acaule parviflorum* and *montanum* are all represented in the group, while such things as *Primula lichiangensis*, *Onosma alba rosea*, *Phloxes* in variety and *Aquilegia glandulosa* were all important items in this fine group of plants.

Messrs. Kelway and Sons, Langport, in one of the large tents have a delightful lot of single *Pyrethrums*, *Gaillardias*, *Heucheras* and Tree *Pæonies*. The *Pyrethrums* are a rich and telling lot, delightful in their variety, pleasing in their colour and beauty.

Queen Mary (pink flower), Mrs. W. Kelway (single pink), Langport Scarlet and Cassiope are among the finer forms worthy of attention in this fine lot of hardy herbaceous flowers.

Messrs. Lilley, Guernsey, have a pretty and unusual display of *Sparaxis*, *Iris*es, *Gladioli*, *Brodiaeas*, *Ixias* and the like, and the group is worthy the attention of our readers by reason of its variety, excellence and beauty.

Messrs. Rich and Co., Bath, have a very pleasing arrangement of *Pyrethrums* in Tent No. 2, and all interested in these showy hardy flowers should search them out and see what they have in store for the hardy plant garden generally.

Near by, Messrs. G. and A. Clark, Limited, Dover, have a showy group of *Iris*es, *Thalictrums*, the new double *Geum* Mrs. J. Bradshaw and a very charming lot of single *Pyrethrums*, which are showy in the extreme.

Messrs. Harkness and Sons, Bedale, Yorks, have a very handsome exhibit of *Verbascums*, *Lupines* and *Globe Flowers*, the latter including such things as His Majesty, Gold Crest, Bessie Walker, Triumph and Miss Willmott. *Verbascum International* (a yellow bronze variety of great size of blossom) is also to be seen on the stand of this firm.

The Eremuri, *Iris*, *Trollius*, *Phlox*, *Verbascums* and *Lupines* from Messrs. Artindale, Sheffield, are well worthy of inspection, and as a showy lot will well repay a little study.

From the famed nurseries of Messrs. George Bunyard and Co., Maidstone, have come a superb lot of Oriental Poppies, *Pyrethrums*, *Eremuri*, *Lupines*, *Ixias*, *Verbascums* and other plants, the whole making a sumptuous gathering of the best hardy flowers of the moment.

In this same tent, Mr. M. Prichard, Christchurch, again excels, and his stand of *Iris*, *Eremuri*, *Pyrethrums*, *Pæonies*, *Lilies* and Poppies are things to look for, things to admire, and something to remember.

Mr. Reginald Farrer, Craven Nursery, Clapham, Yorks, has one of the choicest exhibits in the entire show, a group rich in alpine, dominating in cultural excellence and appealing by reason of rare beauty and merit. It is one of the collections of alpine to which we would send all our readers; one also wherein much of the charm of alpine vegetation will be found, and from which may be gathered much useful information. Of the more noteworthy examples we may instance the lovely Tyrolean *Daphne rupestris*, with its crowd of pink blossoms above a tuft of growth 3 inches or so high, which is a gem of the first water sufficient to charm and delight all lovers of these plants. *Edraianthus serpyllifolius* major, with its mass of royal purple bells strewn the floor, and overtopped by graceful panicles of *Saxifrages*, is something to look for and something to remember. It is suggestive, too, in its garden effect and beauty. *Ramondias*, *Haberleas*, and *Primula farinosa*, in a rich and delightful colony, constituting, as it were, the herbage of moist upland pasture, is a sight alone. *Ranunculus parnassifolius* is a serenely pure and lovely white alpine, while the *Trilliums*, *Cypripediums*, *Ramondias*, *Haberleas*, *Campanula Allioni*, *Androsaces* and *Primulas* constitute such a feast of these plants as is rarely got together. Choicest of the choice, this is one of the exhibits under canvas for which the alpine-lover must seek, and, having found it, make sure that he will not be sent empty away.

In a large Lily group, Messrs. Wallace and Co., Colchester, have arranged many of their finest

specimens, such species or varieties as *Hansonii*, *Batemanniae*, *Leucanthemum*, *myriophyllum*, *tenuifolium* and *japonicum colchesterense*, also known as *odorum*, appealing to the specialist at once. It is a veritable feast of the tribe, something not to be missed by those who seek for the best of everything.

VIOLAS.

Violas (Tufted Pansies) are shown by Messrs. W. Artindale and Son, Sheffield, as growing plants. Freely-flowered specimens growing in boxes call for special mention. Some sixty boxes are shown by this firm in the class for 100 feet of *Violas*, and they serve to illustrate the free-flowering propensity of these plants and their great diversity of markings and colouring. A few of the better sorts are Moseley Perfection (a grand yellow), Lady Knox (primrose), Acme (plum), A. S. Frater (white, edged heliotrope), and Kathleen and Gladys Finlay (two good fancy flowers).

A pretty series of twenty pans of growing plants are shown by Messrs. Whitelegg and Page, Chislehurst, Kent. In most cases the plants are flowering profusely, the more striking examples being Acme, Peace, Councillor Waters, Mrs. Chichester, Bridal Morn and Marchioness.

Messrs. Rich and Co., Bath, have a small exhibit of *Violas*. Individual blooms are placed in tubes let into velvet-covered boards. The effect was not good.

For the 100-foot group of *Violas*, Messrs. Gunn and Son, Olton, Warwickshire, are showing lifted plants packed tightly in round baskets, and in this way they make a most effective display. The best varieties are *Viola cornuta purpurea*, Moseley Perfection, Colonel Wolferston, Madge, John Quinton, Bronze Kintore, Swan, James Pilling, Belfast Gem, J. Rowlands, Dr. McFarlane and A. J. Bastock. The same firm are competitors in the class for twenty baskets of *Violas*, growing plants, showing specimens basketed in precisely the same way and many of the same varieties as are exhibited in the larger group. This firm has done well to keep their stock in such healthy condition.

SWEET PEAS.

NON-COMPETITIVE.—IN THE CUT FLOWER TENT.

Messrs. Dobbie and Co., Mark's Tey, Essex, are staging an excellent exhibit of Sweet Peas, both as cut flowers and growing on the plants. The latter, which form a natural background, are growing in boxes and are 9 feet high, comprising standard varieties and novelties. The cut blooms embrace Dobbie's Scarlet (a striking scarlet variety, carrying in nearly all cases four flowers on a spray), Dobbie's Cream (a large, well-formed flower), Lady Miller (apricot pink), Brunette (of a pure self mahogany colour), Decorator (a pleasing shade of old rose) and Melba (one of the largest Sweet Peas in cultivation, having flowers nearly three inches in diameter). Some splendid specimens of Mrs. W. Cuthbertson are staged, the sprays in question bearing from four and five to nine individual flowers on a spray, the largest of which is fasciated. Lady Knox, one of the best cream varieties, with buff tints, is in good form, and Mauve Queen was also noted.

Robert Sydenham, Limited, Tenby Street, Birmingham, have a representative collection containing several choice varieties. Lilian (pale salmon pink), Barbara (another pleasing shade), Edith Taylor (glowing rose), Lady Evelyn Eyre

(an improved form of Mrs. Hardcastle Sykes), Scarlet Emperor (a very strong - growing variety), Iris (salmon pink), Mrs. T. W. Warren (a waved form of Helen Pierce) and Charles Foster.

Another excellent exhibit is that staged by Mr. C. W. Breadmore, High Street, Winchester, and many well-finished blooms are shown. Special notice must be made of Aggie Elder (rosy cerise in colour and of good form and substance), Princess Mary (bright blue and shot wings, flowers being borne in fours), Lord Curzon (bright magenta), Flossie Jeffery (pale shrimp pink), and Iris (a deeper shade of the foregoing variety). Frilled Cream is denoted by its name, and is a seedling of the present year. A spray of Elsie Herbert is to be noticed bearing eight flowers.

Mr. C. W. Breadmore also stage a collection, comprising seventy specimens of Sweet Peas in all the best varieties, grown in tubs on "Simplicitas" netting.

Messrs. R. H. Bath, Limited, The Floral Farms, Wisbech, also have a special stand of Sweet Peas, notable varieties shown being Felicity (a variety which will be now shown as Mauve Queen, and is identical in colour with Dobbie's Mauve Queen, the latter variety securing a first-class certificate

of novelties of their own raising, the principal varieties being Helen Williams (picotee edged, and of a brighter colour than Mrs. C. W. Breadmore), Margaret Cook (a giant bicolor, pale old rose standard, and cream wings veined rose), The Lady (a fine, bold flower of perfect form), Fair Maid Improved (a giant Spencer, flesh on cream ground, a very pretty flower), Stark's Salmon (a robust grower which stands the sun well), Emmie Tatham Improved (a charming shade of old rose), Mrs. R. W. Pitt Improved (a bright crushed strawberry Spencer) and Florence Wright Spencer (pure white, of good form and substance).

Mr. C. W. Breadmore is showing a most interesting and varied collection embracing all the novelties which he has staged in his non-competitive group.

Mr. W. E. Alsen is staging the new double variety Annabel Lee (a pleasing lilac shade, with paler centre), Bobby Stewart (pale delicate lilac), Moneymaker (pure white, a good flower), Minnie Furnell (a pleasing salmon pink), also a fine bunch of R. F. Felton, Melba, Stirling Stent and George Stark.

Messrs. Lumley and Co. are showing some varieties of excellent merit, including Veronique (a marbled Spencer of good form and striking

Holmes, Empress, Nubian, Zephyr, Elsie Herbert, Doris Usher and Freda.

For a group of Sweet Peas consisting of varieties sent out since September, 1910, there are two entries, the principal varieties being Nettie Jenkins, Royal Rose, Charles Foster, Dobbie's Cream, Elfrida Pearson and Empress.

Class 310: First, Mr. C. W. Breadmore; second, Mr. W. E. Alsen, Denmead Nurseries, Cosham, Hants; third, Messrs. W. Lumley and Co., Hayling Island, Hants.

Class 311: First, Sir Randolph Baker, Bart.; second, Mr. L. H. Hatting, The Nest, Hornchurch, Essex; third, the Birmingham Industrial School, Shustoke, Warwickshire.

FRUIT.

NON-COMPETITIVE. IN LARGE TENT.

The King's Acre Nurseries, Hereford, are showing an extensive collection of fruiting trees in pots, among which we noted some fine specimens of Apples, Pears, and Peaches, which are very good for the season; also a large trained specimen of Duke of York in a pot bearing several fruits. Figs are well to the fore, and the true variety of Osborn's Prolific is shown.

An excellent display was staged by Messrs. T. S. Rivers and Son, Sawbridgeworth, Herts, the well-known raisers and growers of many choice varieties. The visitor will not be disappointed on this occasion, as the new 101 Seedling Nectarine is well fruited and perfectly ready for table, being a week earlier than Early Rivers. This variety was raised from the white-flowered Nectarine, and we think will prove a useful variety for forcing work. A new second-early Peach, Kestrel, is also in good condition. A well-fruited specimen of Cherry, Guigne Annonay, is conspicuous. Plums are represented by Early Rivers, Curlew and Blue Rock, and Pears and Apples are well shown. Citrus are also an interesting feature as shown by this firm. Among the collection we noticed the Grape Fruit, White and Imperial Lemons, and Shaddocks. A very fine specimen of the Horned Orange, *C. corniculata*, also Maltese, St. Michael's and Seville varieties, and others with variegated foliage, are to be seen.

Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson), Gunnersbury House, Acton, has arranged a most effective display for a private grower; it consists of a central avenue with a pergola, or series of arches, in the centre, which are covered with Virginian Creeper, and the top is ornamented with Vines bearing several bunches of Grapes, which are well finished for so early a date. The sides of the arches are made conspicuous by having fruiting Melons in pots at the base of each. These are remarkable for their healthy foliage, the two chief varieties shown being Eminence and Ringleader. Along both sides of the central avenue a large collection of pot fruit trees are staged, consisting of fifty varieties in thirteen kinds. Cherries, which are shown in twelve varieties, are a special feature. Peaches, Nectarines, Loganberry and Newberry, Strawberries, &c., make up the display.

Messrs. Laxton Brothers, Bedford, who are well known as Strawberry specialists and raisers, have the following new varieties to the fore: King George V., excellent for forcing, which it is anticipated will replace Royal Sovereign for this purpose, being a week earlier and of better flavour and colour than the latter, and a robust grower. Maincrop, for midseason work, has a very large, wedge-shaped fruit of exceptionally fine flavour. The Queen, considered equal



DECORATED TABLE OF DESSERT FRUIT SHOWN BY HIS MAJESTY THE KING IN CLASS 351. THIS WAS AWARDED THE GOLD MEDAL AND FIRST PRIZE, AND INCLUDED THE BEST FRUIT IN THE SHOW.

last year), Isabel (a pale pink of pleasing shade), Mrs. R. Hallam (creamy pink), Tennant Spencer (in good form), Scarlet Emperor, Edith Taylor, Dorothy (a charming pink shade), Thomas Stevenson (well finished), and Charles Foster (this variety coming remarkably well under glass).

Mr. J. Stevenson, Wimborne, is staging an extensive collection of up-to-date novelties, including T. Stevenson, Doris Usher (pink), Bertie Usher (blue flaked), Scarlet Emperor and Empress, May Campbell, Mrs. Cuthbertson and some good unnamed seedlings. All the Sweet Peas are in first-class condition. Indeed, it is really marvellous the colour, size and substance that growers have been able to impart to the flowers at such an early date, and the exhibits reflect the greatest credit on those responsible for the growing of the blooms.

COMPETITIVE. THESE EXHIBITS ARE STAGED IN TENT NO. 6.

Messrs. G. Stark and Son, Great Ryburgh, Norfolk, are staging an exhibit composed entirely

colour), The Abbot (a mottled pale chocolate variety), Mrs. E. Noakes, Avalanche and Constance Oliver.

Mr. J. Agate, Sea View Nurseries, Havant, has some good bunches of Captain Travers (bright orange), Mr. Herbert Lees (pink on a white ground), Barbara, Stirling Stent, Charles Stent (a large rose pink flower), Felice Lyne (a bright cerise shade which is very effective) and several other leading varieties.

Messrs. S. Bide and Sons, Farnham, also stage some good flowers, having a most interesting display.

Mr. J. Stevenson, Wimborne, also shows a collection in competition.

COMPETITIVE.—AMATEURS.

In the class for Messrs. Dobbie and Co.'s Cup, for a group of Sweet Peas not to exceed 6 feet by 3 feet, there are three entries. Sir Randolph L. Baker, Bart., Ranston, Blandford, has a very fine display, the varieties being Dobbie's Cream, Edrom Beauty, Hercules, Evelyn Hemus, Maud

in flavour to British Queen, which fruit it resembles in shape, is a robust grower and good cropper. The Earl is in every respect an improved Vicomtesse of similar flavour, a much larger fruit and as free a cropper. The Laxtonberry is a hybrid between the Loganberry and Raspberry, being quite as sweet as the latter, the fruit of which readily separates from the core, and has the habit of the Loganberry. Other specimens of fruiting trees of various kinds were staged.

IN THE FRUIT TENT.

Messrs. George Bunyard and Co., The Royal Nurseries, Maidstone, are staging a choice collection of seventy-five varieties of Apples, among which are to be noticed Farmer's Seedling, Blue Pearmain, Alverstone, well-finished, highly-coloured specimens of Smart's Prince Arthur (of large, conical form), Calville de Femmes, Calville Malingerie, Cox's Orange Pippin, Foster's Seedling, Belle Pontoise, Belle de Bois, Gros St. Clements and Sturmer Pippin. A handsome dish of Uvedale's St. Germain Pear is also shown.

Messrs. Storrie and Storrie, Glencarse, Perthshire, have a representative collection of hardy fruits as cultivated generally. They are also exhibiting Currants, fruiting in pots, in the following varieties: Black Naples, Red Dutch and White Transparent, finished off with a floral ground-work.

MELONS.

For the best-flavoured white-fleshed Melon, Mr. A. J. Thornhill secured first with a medium fruit of Hero of Lockinge, Mr. C. H. Beckett coming second with a larger fruit of the same variety, and the Horticultural College, Swanley, third with Elmcroft Beauty.

For a class of twenty-four Melons, not less than six varieties, Mr. C. H. Beckett, Chilton Gardens, Hungerford, stages a most excellent exhibit, which includes Countess and Barnet Hill Favourite; they are well finished and beautifully netted (first prize). His Grace the Duke of Westminster, Eaton Hall, Chester, also has a good display, which includes Eaton Seedling, Hero of Lockinge, Countess, Eminence, Cestrian and Scarlet Queen (second prize). Mr. C. F. Raphael, Porter's Park, Shenley, Herts, has a large exhibit of good fruits, the principal varieties being Universal, Ringleader and Royal Jubilee (third prize).

For one green-fleshed Melon, the Horticultural College came first with Emerald Gem, which is beautifully netted; Mr. W. B. M. Bird, Earham House, Chichester, second with the same variety; and Mr. F. B. J. Wingfield Digby third with Buscot Park Hero.

For the best scarlet-fleshed variety, the Horticultural College led with a well-netted fruit of Superlative, Mr. C. H. Beckett coming second with Sutton's Scarlet.

For two varieties of Melons, one fruit of each, the Horticultural College took the lead with Superlative and Emerald Gem; second, Mr. F. B. J. Wingfield Digby with Hero of Lockinge and Greengage.

GRAPES.

For one black and one white variety, two bunches of each, the Marquis of Salisbury, Hatfield House, secured first with good bunches of Muscat of Alexandria and Black Hamburg. Mr. R. W. Perkins, Greenford, Harrow, obtained second with Black Hamburg and Foster's Seedling. Sir W. Greenwell, Marden Park, Caterham, took third with similar varieties.

For two bunches of Black Hamburg, the Trustees of the Duke of St. Albans (the Duke of Leeds), Bestwood Lodge, Arnold, obtained first with two well-formed and well-finished bunches. The Marquis of Salisbury came second and Mr. R. W. Perkins third.

For twelve bunches of Grapes, not more than three bunches of one variety, Lady Wantage was awarded first for a very pretty exhibit, including Madresfield Court, Foster's Seedling, Buckland Sweetwater and Black Hamburg; the bunches are beautifully staged, with an effective ground-work of Ferns.

For two bunches of Foster's Seedling, Sir W. Greenwell led with excellent bunches. Mr. R. W. Perkins came second and Mr. C. H. Beckett, Chilton Gardens, Hungerford, third.

His Grace the Duke of Portland, Welbeck Abbey, took the first prize for well-finished bunches of Foster's Seedling.

STRAWBERRIES.

For a dish of twenty fruits of Strawberries, the Earl of Lytton, Knebworth, Herts, came first, the Marquis of Salisbury second, and Mr. J. Adams, Leigside Nurseries, Lewes, third, all with Royal Sovereign.

For three varieties of Strawberries, Mr. F. B. J. Wingfield Digby, Sherborne Castle, Dorset, obtained second; no first was awarded.

For a collection of Strawberries, nine varieties, the Marquis of Salisbury took first with some splendid specimens of Bedford Champion, Leader, Royal Sovereign, Reward, Monarch, Utility, British Queen, The Bedford and Waterloo, all in excellent condition.

PLUMS.

For two dishes of Plums, distinct, the Duke of Westminster took first.

For a dish of Brown Turkey Figs, the Marquis of Salisbury led with well-coloured fruits, the Duke of Portland being second.

PEACHES AND NECTARINES.

For a collection of Peaches and Nectarines, three dishes of each, the Duke of Portland came first with some excellent examples of Duke of York, Alexander and Hale's Early Peaches, and Cardinal, Early Rivers and Lord Napier Nectarines.

For a dish of six Nectarines, the Trustees of the Duke of St. Albans led with Early Rivers, the Duke of Portland second with Cardinal, and Mr. C. H. Beckett third with the same variety.

For a dish of Peaches, the Duke of Portland took first place with Alexander, and the Trustees of the Duke of St. Albans second with Hale's Early.

For a collection of Peaches and Nectarines, three dishes of each, the Trustees of the Duke of St. Albans were awarded second with Peaches Hale's Early, Amsden June and Duke of York, and Nectarines Early Rivers and Cardinal.

COLLECTIONS OF FRUIT.

For a collection of nine dishes of fruit, His Majesty King George V. shows splendid examples from the Royal Gardens, Windsor, including some excellent bunches of Grapes Foster's Seedling and Black Hamburg of good size and quality, Melon Eminence, Strawberry Royal Sovereign, Plum Jefferson (beautifully finished), Duke of York Peaches, Cardinal Nectarines, Brown Turkey Figs and Black Tartarian Cherries. Second prize was secured by Mr. F. B. J. Wingfield Digby with a large fruit of Premier Melon, Foster's Seedling and Black Hamburg Grapes, and others.

For a collection of twelve dishes of fruit, the Duke of Westminster led with a fine collection, Grapes being represented by Muscat of Alexandria, Black Hamburg and Madresfield Court; Nectarines, by Early Rivers and Lord Napier; Peaches, by Royal George and Hale's Early; Plums, by Transparent Gage; Cherries, by Bigarreau de Meyel; Melon, by Marchioness, of good quality and fine form; and some highly-coloured fruits of Apple Lady Sudeley. Second prize was secured by the Marquis of Salisbury, who shows the only Pineapple staged of The Queen variety, a fine specimen of Universal Melon, Muscat of Alexandria and Black Hamburg Grapes, Royal Sovereign and Waterloo Strawberries, Hale's Early and Amsden June Peaches, Lord Napier and Early Rivers Nectarines, Brown Turkey Figs, and Early Rivers Cherries.

The premier class for fruit is that for twelve dishes of dessert fruit, not less than six distinct kinds, decorated with plants and flowers. His Majesty the King took the leading honours with a most magnificent display, embracing black and white Grapes of excellent size, quality and merit, the varieties being Black Hamburg, Foster's Seedling, Madresfield Court and Muscat of Alexandria, all magnificent; Melons Eminence and Superlative, Peaches Amsden June and Duke of York, Cardinal Nectarine, Brown Turkey and White Marseilles Figs and Royal Sovereign Strawberry, the floral decorations being composed of Orchids and Lilliums, most tastefully arranged. An illustration of this exhibit, which reflected the greatest credit on the King's head-gardener, Mr. Mackellar, and his staff, is given on p. 267. The fruit was the best we have ever seen in May. Second prize was taken by the Duke of Westminster, who also stages a grand exhibit having some fine specimens of Emperor Melon, Muscat of Alexandria and Madresfield Court Grapes, Early Rivers and Lord Napier Nectarines, Royal George Peaches and Brown Turkey Figs, the whole being tastefully decorated with Orchids and choice flowers. The Marquis of Salisbury was placed third with some good examples of Melons, Strawberries, Peaches, Nectarines, Figs and Cherries, decorated with Carnations, Lilliums, Sweet Peas and Selaginella.

FRUIT IN THE OPEN.

Messrs. James Veitch and Sons, Limited, Royal Exotic Nurseries, Chelsea, S.W., have a most effectively-arranged exhibit of fruiting trees in pots, plunged in the grass, representing the various methods of training. The use of the Loganberry for pergolas is demonstrated in a practical manner. Another special feature are Pears trained as vertical cordons and planted in straight rows, with specially-trained trees for the end of rows in order to utilise the whole wall space. Well-fruited horizontal-trained examples are Beurré Rance and Doyenné du Comice, Gooseberries, Plums, Cherries, Quinces and Apricots are also included, and some fine specimen standard Apples, with Mistletoe growing happily upon them, are planted at the entrance to the central avenue of the exhibit.

Messrs. Laxton Brothers, Bedford, also show examples of trained fruit trees, growing in pots, of many and varied shapes, in all the leading kinds. Two interesting hybrids may be seen in this display—the Cherry Plum, which is a hybrid between the Cherry and Plum, and the Peach Plum, a hybrid denoted by name.

Messrs. Stuart Low and Co., Bush Hill Park, Enfield, have a collection of trained trees in a variety of forms and of the leading kinds.

CARNATIONS AND PINKS.

The display of all kinds of Carnations is very fine. I have carefully gone round all the tents and seen all that was to be seen; but, unfortunately, as I have to complete these notes at an early hour, there were still some few to be staged. In my judgment I think the honours of the show will fall to Mr. C. Englemann of Saffron Walden. An old hand at growing Perpetual-flowering Carnations on a very big scale, and who pretty well knows what has been done both here and in America, told me that he thought Englemann's group in Tent No. 4 (the large tent) for competition in Class 217 is probably the best group ever staged. It is magnificent; the quality of the flowers and their grouping leave nothing to be desired. A large vase of Felton's Japanese basket-work holds a huge bunch of Elecktra, a delightful pink-tinted orange bloom. Pillars of choice varieties flank it on either side, and some vases fill in the intervening spaces. In Tent No. 2 the same exhibitor has fine examples of his six 1912 novelties—Elecktra, Salome (a weird combination of pink and dull mauve), Sunstar (a bright yellow, flecked with pink, named after the Derby winner of 1911 because it was first shown at the Temple on the day the big race was run—not a bad idea for a lucky name!), British Triumph (a bright maroon), Rose (a bright rose) and Lady Northcote (a salmon pink, a most lasting flower when cut, and very free). It has just received a first-class certificate from the Perpetual Flowering Carnation Society. Of quite different types, but equally beautiful, are the exhibits of Mr. James Douglas and Mr. Blick. Both stage choice border varieties, many of which are quite new. In Tent No. 6 the latter gentleman has a group of cut blooms, the two most interesting flowers in which are Queen Mary (a very sweet-scented pink) and King George. These varieties were presented to the Queen a few days before the Coronation, and she honoured them by naming one after the King and one after herself. Visitors will say the Queen is no bad judge of good flowers when they see them. In Tent No. 4 Mr. Blick has a group in pots. Caradive (a glowing vermilion and pale orange Picotee), and Victory, a pale rose pink and buff, are very taking flowers. These two fancy yellow-ground Picotees appealed to me very much. Some day we will have similar things in the Perpetuals, I am told. Mr. James Douglas has some beauties in his group in Tent No. 5, and his competition vases will have to meet something very good indeed to be beaten. Jean Douglas is a "top-hole" scarlet border variety of excellent shape, with large, smooth-looking, unserrated petals. It is a fine garden plant; in fact, Mr. Douglas considers it a *nulli secundus*, and he should know. It has just been put into commerce. Mrs. Henwood is almost its counterpart in white as Miss Willmott is in pink. Elizabeth Shiffner is a splendid orange buff, which was sent out, I think, last year. It reminds one of the old Mrs. Reynolds Hole somewhat in colour. I was surprised to hear how much Pinks are coming into favour for border and rockery decoration. Mr. Douglas has two nice new ones with his Carnations in Tent No. 5; they are named Simplicity and Captivation, and Bookham Gem is one of the best "laced."

Mr. G. H. Herbert has twelve huge four year old plants of his special variety, Progress. Each of them bears from eighty to one hundred fine rosy mauve blooms. It is a grand doer, and its freedom of flowering can be judged from

twenty-four small pots which are along with it. On the extreme east (next the avenue) of the monster tent the pot plants are staged in attractive groups. Those of Mr. C. Turner of Slough, Mr. H. L. C. Brassey, M.P. (gardener, Mr. Fitt), Mr. Mount of Canterbury and Mr. C. F. Raphael (gardener, Mr. Grubb) are arranged along the side, and very well they look. Mr. Raphael's flowers (Class 216) are very large, fresh and beautifully arranged. Princess of Wales, which the gardener considers the best Malmaison there is, occupies a big centre, and at the top corners are clumps of the lovely red Lady Coventry, and correspondingly at the lower corners are the Old Blush and the new Duchess of Westminster. Hard by these is a long attenuated first-quarter moon-shaped bed. The ground is *Statice profusa*, and five clumps of fine examples of Malmaisons come up out of it. Valetta (deep blush), Old Blush, Duchess of Westminster and Princess of Wales are the sorts chosen. It is an original and pleasing group. Not far, again, from this, in the same tent (No. 4), is the imposing exhibit of Messrs. Cutbush and Son. Great mounds of The Queen (terra-cotta), Lady

of colour. In Tent No. 2 I found a regular feast of Carnations (Class 223). I have already referred to Mr. Englemann's lot. Adjoining it are Messrs. Allwood Brothers with their *La Rayonnante* (large deep yellow, *the yellow* up to date), *Geisha* (heliotrope) and *Wivelsfield Wonder*, all displayed in the famous Coldrum vases; they have an attractive group. So, too, have Mr. Dutton and Mr. C. Waters. Mr. Dutton's Mrs. A. F. Dutton is one of the best, if not the best, of all rose pinks. It is a sport from *White Perfection*; it has all the good points of that variety, and, in addition, is doubly as free. The centre of the bloom is a deep rose, which seems to get lighter and lighter towards the circumference. It is most attractive in a big bunch. Mr. Waters has two useful items in *Edith Waters* and *A. E. Manders*, the former a bright cerise and the latter an orange and pale carmine striped. Both should be seen. In Tent No. 6, at the River end, there is a fine stand of good, well-known varieties from Mr. H. Burnett. The season has been a trying one for him, and as a result we have a smaller group than he otherwise would have staged. His Mrs. Raphael is one of my special



PORTION OF MESSRS. LAXTON'S GROUP OF FRUIT. THE STRAWBERRY IS THE NEW KING GEORGE V.

Coventry (scarlet) and Queen Mary (maroon, border variety) are conspicuous. The old yellow border *Cecilia* is well shown. It is still about the best yellow for the garden.

Messrs. Stuart Low and Co., in Tent No. 5, have two good banks; one is entirely of Perpetuals and the other Malmaisons. In the latter, *Princess Juliana* is most conspicuous. The firm list it as an orange, but it is a very pale shade. I found, however, from the examples displayed that many blooms were more of a pink than anything else. The bizarre effect is rather nice. Another novelty is the crimson-purple Malmaison *Cleopatra*. It is a large bloom, which lasts well and is sweet-scented. Among this firm's Perpetuals, *Baroness de Brien* (a fringed deep shade), Mrs. Burnett (pink) and *Cinnabar* (the curious dusky scarlet) took my eye. Some people, I hear, say the latter is small. I do not think any the worse of it for that. Poor flowers, you might be of no use unless you were mighty giants! The same fault might be found with Mr. C. Turner's *Ruby* (Class 221), which is one of the sweetest flowers I put my nose to in the show. Its name well describes its shade

favourites. In the same tent, not very far away, we have *Chrysanthemums* and Carnations from Mr. W. Wells. His fine, white, sweet-scented *Wodenethe* looks well, and is certainly all that is claimed for it in sweetness.

Other exhibitors whose exhibits were not staged, or which I missed, were Lord Burnham, Mr. Bell of Guernsey and Mr. Fisher. No one who is interested in Carnations should miss a visit to the French Section. M.M. L. Ferard, Henri Vacherot and Rivoire and Son each have examples of Carnations according to French taste. It goes without saying that they are tastefully arranged, and the blooms are shown to their best advantage. A new race, *The Colosse*, has been raised by M. Vacherot, and he has fine examples of six of them in his group. *Jupiter* (red) and *Diane* (flesh) are the ones I liked best. But my space is now written up.

With many regrets I lay down my pen, for justice has not been done to half of the lovely flowers that are waiting to be admired. To slightly alter a now historic saying, "Go and see."

J. J.

TULIPS.

Since first the date of the "International" was fixed, Tulip-lovers have looked forward to the big show as being the chance of a lifetime to place some of its most attractive classes before the gardening public. Everyone expected to see Darwins, Cottages, Parrots and Florists "by the acre." It was just the week for them; the schedule committee frames most suitable classes which seem to be going "merry as a marriage bell," when, for some reason or another, Jupiter Pluvius withdrew his kindly help and left old Sol to warm us up at least two weeks before we wanted to be. Hence, no Tulips—not literally, but figuratively. Five persevering firms have staged groups; but oh! the labour and anxiety entailed. One lot spent two weeks of their life in a cellar. How the others passed their time I know not; but there they are, and I ask all who read these lines to make the best of them. They will give those who do not know them a faint idea of the beauty. Let me especially ask readers to look at Excelsior, Thérèse Schwartz, Moralis, The Dove, Louis XIV., Clara Butt and Primrose Beauty at Hogg and Robertson's; at Inglescombe Yellow at W. T. Ware's, Limited; at Melicette, Eric, Orange King, The Fawn, Emerald Gem and Rosamond at Dicksons' of Belfast; at the old double blue Flag, Quaintness, Hammer Hales, Bouton d'Or, Ellen Willmott, Perle Royal, Carnation and Pride of Inglescombe at Barr and Sons'; at Blue Amiable, Farncombe Sanders, King Harold, Edmée, Galatea and Glare of the Garden at R. H. Bath's; and at Cygnet, French Crown and Velvet King at Jeffries'. Should Mr. Bentley be exhibiting florist varieties, they must not be missed. All the Tulip exhibits will be found in Tent No. 6. JOSEPH JACOB.

SCIENCE AND EDUCATION TENT.

Though less showy than those of some of the other tents, the contents of the Science and Education Tent are not of less interest to all who grow plants. Three exhibits outside call for mention, all relating to fruit trees.

That from Reading College illustrates the growth and training of fruit trees from the youngest to their full development.

That from the Woburn Experimental Station illustrates particularly the various insect attacks to which fruits are subject, all in working order, also silver-leaf, while another portion of the same exhibit illustrates the effect of grass on the growth of trees.

The fruit trees from the John Innes Institution show the self sterility and self fertility in Plums.

Inside, Dr. Russell of Rothamsted illustrates in a striking manner the effect of soil sterilisation by various means on the subsequent growth of plants; and Dr. Brenchley, from the same station, shows water cultures, illustrating the effect of minute quantities of certain poisonous substances on stimulating the growth of plants.

Plant propagation is illustrated by the admirable exhibit of cuttings, &c., sent from the Royal Botanic Gardens at Edinburgh.

Professor Armstrong shows the effect minute quantities of certain stimulants have on plants.

Mr. H. J. Veitch shows a long series of grafts of plants belonging to one genus on stocks belonging to another, probably a larger collection than has ever before been got together. Mr. Daniel also has an interesting series of pictures in connection with grafting; while Professor Winkler shows the

extremely interesting graft hybrids between *Solanum nigrum* and the Tomato.

Professor Blackman illustrates by means of apparatus many facts in vegetable physiology.

Mr. Cheeseman of East Burnham shows a large number of seedlings of trees grown in water indoors.

Of exhibits dealing with plant diseases caused by fungi, there are a large number. Mr. Massee's beautiful drawings are especially noteworthy.

Mr. Horne illustrates Potato diseases by means of living specimens; Dr. Pethybridge, by means of preserved specimens; and Mr. G. T. Malthouse, the dreaded black scab of Potatoes.

Mr. Brooks shows the fungi which produce Plum rust in all their stages, and cultivations and specimens of *Stereum purpureum*, the cause of silver-leaf. The last-named disease Professor Percival also shows.

Mr. Salmon illustrates a number of fungoid diseases of fruit trees by means of living and preserved specimens; and the Board of Agriculture has maps showing the distribution and spread of some of the fungoid diseases, which it aims at



CUP PRESENTED BY HIS MAJESTY THE KING FOR THE BEST EXHIBIT IN THE SHOW, AND WON BY LIEUTENANT-COLONEL SIR G. L. HOLFORD, K.C.V.O., C.I.E., WITH THE ORCHIDS ILLUSTRATED ON PAGE 262.

repressing by legislation, and also by the distribution of literature relating to fruit-growing throughout the country.

Professor Theobald's exhibit shows a variety of the most injurious pests of cultivated plants; and Dr. MacDougall's series of figures also illustrate the same point. The other side of the table is illustrated by Dr. Berger's most interesting series of fungi which attack and destroy scale insects themselves parasitic on Oranges and so on.

In plant-breeding the most interesting exhibits are those of Messrs. Sutton, comparing old-fashioned with new varieties of vegetables, and the various species of *Solanum*.

Professor Bateson and Professor Keeble show *Tropæolums* and Chinese *Primulas* respectively, illustrating the numerous variations obtained in the second generation from the cross. Mr. Hurst illustrates the same thing with crosses of *Berberis Darwinii* and *B. empetrifolia*; and Mr. Cuthbertson

exhibits a most interesting series of paintings of Sweet Peas to show the parentage of some of these popular plants.

WINNERS OF CUPS AND MEDALS.

His Majesty the King's Cup, for the most meritorious exhibit in the show, was won by Lieutenant-Colonel Sir George Holford, K.C.V.O., C.I.E., with Orchids.

Queen Alexandra's cup for the best rock garden was won by Messrs. R. Wallace and Co.

His Grace the Duke of Portland's Cup, for the best exhibit in the show, Orchids excluded, was won by Messrs. J. Veitch and Sons with stove plants.

Sir Jeremiah Colman's Cup, for the second-best exhibit in the show (winner of the president's prize excluded), was won by Mr. G. Mount with Roses.

Lady Colman's Cup, for Carnations (see Class 216), was won by C. F. Raphael, Esq.

Sir Trevor Lawrence's Cup, for herbaceous plants (see Class 237), was won by Messrs. G. and A. Clark, Limited.

Mr. J. Gurney Fowler's Cup, for fruit (see Classes 349 and 351), was won by the Duke of Westminster.

Mr. N. N. Sherwood's Cup, for Sweet Peas (see Class 310), was won by Mr. C. W. Breadmore.

Mr. A. E. Speer's Cup, for annuals and biennials (see Class 236), was won by Messrs. S. Smith and Co.

The Worshipful Company of Gardeners' Cup, for Roses (see Class 190), was won by Messrs. George Paul and Son.

Messrs. J. J. Grulleman and Sons' Cup, for *Hippeastrums* (see Class 41), was won by Lieutenant-Colonel Sir G. L. Holford, K.C.V.O., C.I.E.

Messrs. Sander and Sons' Cup, for Orchids (see Class 65), was won by Mr. F. Menteith Ogilvie.

Messrs. Charlesworth and Co.'s Cup, for Orchids (see Class 65), was won by Sir Jeremiah Colman, Bart.

Messrs. Bunyard and Co.'s Cup, for fruit (see Class 350), was won by His Majesty the King.

Messrs. Dobbie and Co.'s Cup, for Sweet Peas (see Class 311), was won by Sir Randolph Baker, Bart.

The King's Acre Nursery Company's, Limited, Cup, for Roses (see Class 204), was won by Mr. J. Brown, J.P.

Messrs. George Paul and Son's Cup, for Roses (see Class 197), was won by Mr. J. Brown, J.P.

Messrs. Sutton and Sons' Cup, for vegetables (see Classes 394, 395, 396 and 397), was won by the Hon. Vicary Gibbs.

The National Dahlia Society's gold and silver medals (see Class 314), were won by Messrs. Stredwick.

The National Chrysanthemum Society's gold and silver medals (see Class 189A) were won by Messrs. W. Wells and Co.

The Perpetual Flowering Carnation Society's gold medal (see Class 223) was won by Mr. Bertie E. Bell.

The National Sweet Pea Society's one gold medal and two silver medals (see Classes 310, 311 and 312) were won by Sir Randolph Baker, Bart., Mr. W. E. Alsen and Mr. L. H. Hatting respectively.

* * * Owing to the pressure on our space, and the fact that they were not staged until as late as possible, we are compelled to hold over the report of the vegetable exhibits and sundries until next week.

THE ROSE GARDEN.

EARLY ROSES.

THE high perfection attained by our florists in the forcing of Roses has practically brought summer-time into winter and spring. To see Roses offered for sale in the streets in April was unheard of some thirty years ago; but only recently (in April) I was offered splendid long-stemmed Mme. Abel Chatenay Roses at three a penny!

Although this glut of spring Roses is very remarkable, it does not debar one from admiring and appreciating the first-comers outdoors. How we welcome the first bud of the old pink Monthly or of Gloire de Dijon, telling us that the glorious Rose season will soon be here. I have no doubt but that this season will be quoted in the future as one of extraordinary earliness. Many Roses had buds of quite large size upon them the first week in May, and Conrad F. Meyer was in bloom in a garden close by on May 8, while in my own garden the beautiful snowy white Blanc Double de Coubert, Rosa Hugonis and the common Monthly were also in bloom.

Some Hybrid Perpetuals that made fine long growths last year, and which were left unpruned this spring, were also showing colour at that date. To obtain some early Roses I would commend this plan; Cut out the old wood in autumn and leave the new wood almost full length, merely stopping the plants in September by pinching out the points. In spring do not prune. Of course, one runs a risk of injury by frost, but in sheltered gardens such plants often escape. Rosa sinica will soon be out on walls, and in the open, running upon tree stumps, its lovely hybrid, sinica Anemone, has its buds well advanced. Buds of that unique Rose Juliet are already larger than marbles, and clusters of buds upon Grüss an Teplitz and Hermosa that were sparsely pruned will soon be enlivening our gardens with their charming sprays. The dear little Scotch Roses are fast advancing, and it is always a delight to have them with us, not omitting the beautiful Yellow Scotch or Williams' Yellow. R. altaica is a gem and one of the loveliest of early Roses;

so also is R. hispida, a pale yellow single, the buds of which before they unfold resemble a bijou Isabella Sprunt.

The Rugosa Roses are among our most valuable garden varieties for early flowering. Blanc Double de Coubert (previously mentioned) is grand, and a beautiful crimson is Mrs. A. Waterer, which is as fragrant as brilliant. A fine big bush of Lambert's Carmen is now covered with buds. It is a single of a very glowing purplish crimson colour, and one well worth growing. I have not touched it with knife or secateurs; evidently the correct treatment to ensure a good blooming.

Other beautiful early Roses to look after are Blairii No. 2, Thalia, Euphrosyne, Polyantha grandiflora, Dawson Rose, Jersey Beauty and the pretty little De Meaux or miniature Provence, Mme. Plantier, a well-flowered bush being like a huge snowball. Then there are some of the better-class Roses that flower quite early, such as Climbing Mrs. Grant, Mine. Alfred Carrière and Reine Olga de Wurtemberg, all helping to make our gardens redolent with fragrance and beauty. Our forefathers knew nothing of the pleasures we have to-day, for most of these early Roses were unknown to them, and we have

also the ever-delightful wichuraiana Roses, nearly as beautiful with their glistening foliage as when in bloom, enabling us to clothe unsightly objects with their luxuriant foliage or to form picturesque features wherever desired.

ROSA XANTHINA FLOWERING EARLY.

THIS beautiful gem was in bloom with me on May 13, just about a week later than Rosa Hugonis. For beauty of the individual flower it is far in front of R. Hugonis. The petals are larger, the flower is of a more lovely cupped form and the colour deeper—quite a rich shade of Daffodil yellow, paling a little to the edges of the petals. The true R. xanthina is rather rare; why I know not, because it is quite hardy, growing out in the open among the Penzance Briars quite unprotected in the winter. It is termed the yellow Abyssinian Rose, being a native of that country, and was, and even is now, catalogued by some as R. Ecæ; but according to M. Crepin, R. xanthina is the name given to



CALCEOLARIA VEITCHII, A NEW GREENHOUSE HYBRID WITH MILK WHITE FLOWERS. RAISED BY MESSRS. ROBERT VEITCH AND SONS OF EXETER BY CROSSING C. ALBA WITH C. GOLDEN GLORY, AND SHOWN BY THEM AT THE INTERNATIONAL EXHIBITION.

Carmine Pillar and Waltham Bride will soon make an effective colour mass in the garden, and these will be augmented by the gorgeous Penzance Briars, which should be in every garden—one or two of the sorts at least—for their delicious fragrance following a shower is so refreshing. Una, one of the loveliest of the Hybrid Briars, is always a welcome early Rose, and the unique-coloured Austrian Copper gains admirers every season.

The beautiful Rambler Aglaia, if left unpruned, will be presently like a big golden ball, and its more erect-growing rival, Electra, is seen well in a large bed edged with Ruby Queen pegged down.

the species by Lindley in 1820, whereas R. Ecæ was adopted by Dr. Aitchison in 1880. Another synonym is that of R. platyacantha. M. Crepin says that R. xanthina is grown in a double form in China. One would like to see this double form. It would be interesting to hybridise these species with, say, R. sinica Anemone, and perhaps with the wichuraianas. Who knows what developments we might obtain! If even we could obtain more shades of yellow among the Scotch Roses it would be an immense gain to our gardens. I am trying R. Hugonis upon some of the Hybrid Teas, and I shall do so with R. xanthina. P.

CLIMBING ROSE HIAWATHA.

(See Coloured Cover.)

THIS beautiful climbing Rose, a spray of which forms the coloured cover for this issue, has proved one of the most popular of recent introductions. It was raised by Mr. M. H. Walsh and first put into commerce in 1905, since when it has found its way into nearly every garden where Roses are grown. It has a vigorous trailing habit, and is one of the best Roses for a pillar, arch, pergola, weeping standard or screen. Although the flowers are single, they last in good condition for a considerable time, and the plant is not usually badly attacked by insect or fungoid pests. It is now obtainable from any good Rose nurseryman.

SWEET PEA NOTES.

At the "International."—At the time of writing these notes it has not been my pleasure to see

to the hosts of visitors from various parts of the universe who will be present. I hope that those who contribute to the exhibition will reap a rich reward in business as well as the reward that magnificent flowers which one has grown always bring to their possessors.

Watering.—Plants out of doors had not the happiest of times in April, and those who postponed the planting until as late as they dared have not lost, as indeed they never do in our peculiar climate. Right through the month named no rain that was worth measuring fell, and in the Southern Counties at any rate, if not in all, recourse was made to the use of the water-pot much earlier than one likes to have to do it. Although there was generally enough moisture down below, it was too deep to be of substantial advantage, and the top became as dry as we usually expect to see it at the middle of July. We all acknowledge the inestimable value of deep cultivation and incessant surface-stirring;

Disbudding.—This process will now be directed towards the removal of blossom as well as growth buds, and will be carried out in degrees varying widely according to the principal object of culture. Those who aim at the production of the biggest blossoms exclusively for purposes of exhibition will be most severe, while those who desire to gather a few bushels of beautiful, though smaller, flowers on shorter stems will be proportionately moderate in suppression. Many judgments at exhibitions decree that the stems shall be long, say, anything over a couple of feet, and that each shall carry any number of blossoms beyond four; but the home decorator knows full well that stems about twelve inches or fourteen inches long, with three or four flowers artistically set, will make up the most delightful vase in skilful hands.

Syringing.—That evening heavy syringing or hosing—the latter is, as a rule, the better of the two—is advantageous after hot days, and in gardens where there is considerable dust, cannot be doubted for one moment, and the wonder is that it is not more frequently done by amateurs. Its primary benefit may be the invigoration of the plants after an exhausting day; but it has the further, and by no means unimportant, merit of keeping down attacks of green flies and other pests. These enemies of the Sweet Pea and its cultivator do not like applications of cold water coming through a hose or a powerful syringe, and it is not generally necessary to have recourse to other means to ensure their extirpation.

HORACE J. WRIGHT.

TREES AND SHRUBS.

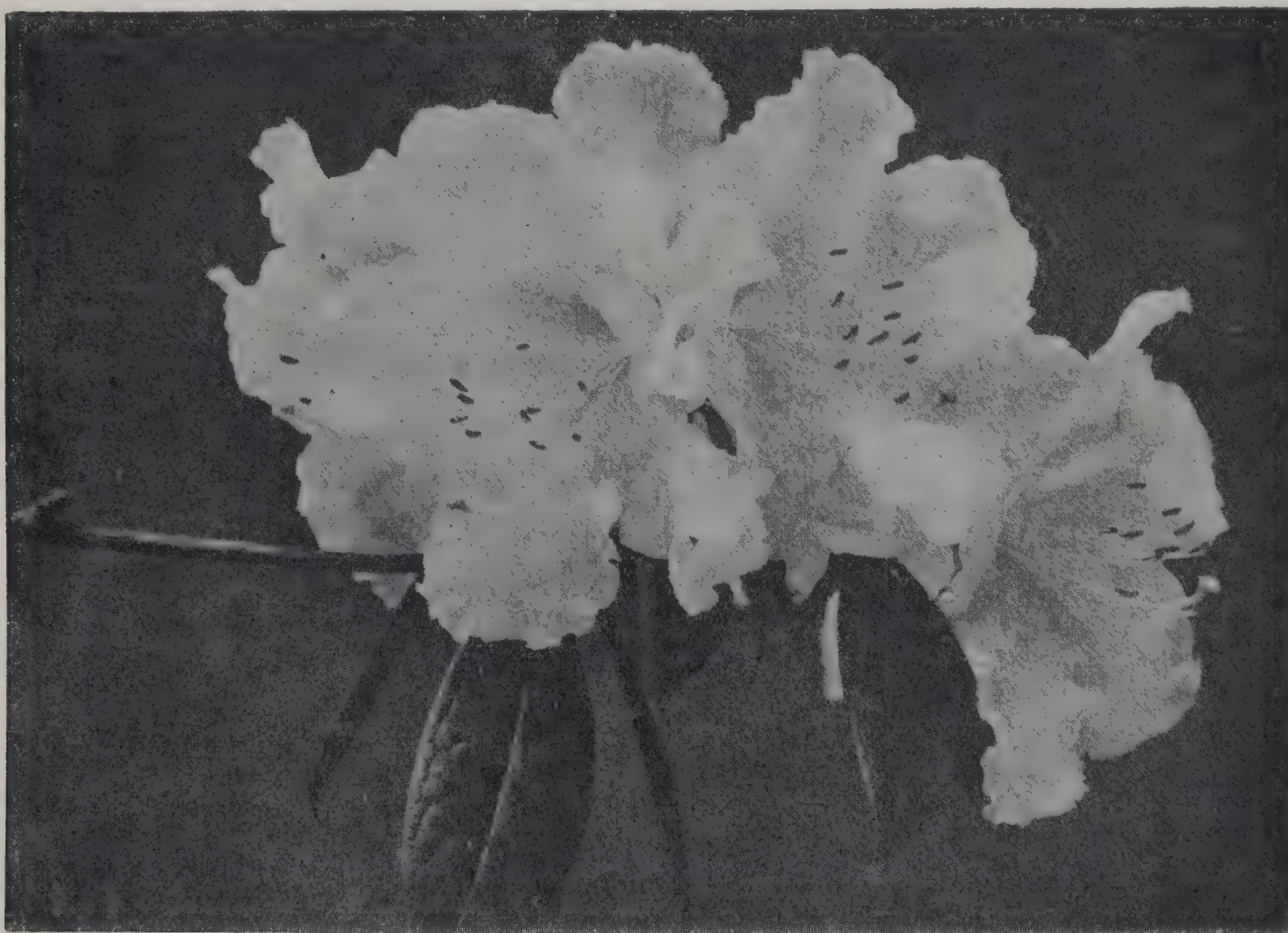
RHODODENDRON FOSTERIANUM.

AMONG the many beautiful Rhododendrons that require the protection of a cool greenhouse, this superb hybrid is certainly one of the very finest yet raised.

It is the result of crossing *R. vitichianum* with *R. Edgeworthii*, two beautiful species in themselves. *R. fosterianum* possesses the good qualities of forming a shrub of robust habit, with a disposition to flower freely, while an individual flower measures from 6 inches to 7 inches in diameter,

which is larger than any other of its section. The loose heads are from three to five flowered, pure white, with a yellowish blotch at the base of the lobes. They are also deliciously fragrant, a single truss being sufficient to scent a large house. This tender race of Rhododendrons is excellent for planting in the borders of a cool conservatory, when during the spring months the plants afford a grand display of blossom, and even during the rest of the year their foliage is very ornamental. Specimens may also be successfully grown in large pots or tubs. They are among the easiest of plants to manage, provided they are planted in a well-drained, light, peaty soil which is free from lime, as Rhododendrons will not succeed where lime is present in the soil or water; therefore rain-water should be used for watering in preference to any other.

W. T.



A FLOWERING SPRAY OF RHODODENDRON FOSTERIANUM.

many Sweet Peas approaching to the flowering stage, but those that I have seen gave grand promise of beauties to come. We grumble, as Englishmen necessarily must do to keep them in a satisfactory state of health and happiness, that the date is far too early for the Queen of Annuals; but we know all the time that our Breadmores, Alsens, Dobbies and many others are more than equal to the task of maintaining their own splendid reputations and that of their country as well. When the issue of THE GARDEN containing these notes is published, there will be such a display of Sweet Peas in the grounds of the Royal Hospital, Chelsea, as has never been brought together at a similar season of the year in any part of the world, and I shall be much surprised if that section of the "International" does not prove to be one of the most attractive of all

but they were never more forcibly demonstrated than this year, and anyone who has been sceptical on the subject hitherto will have no semblance of a doubt in the future. In any event, it is absolutely imperative that the plants shall not be permitted to stop advancing now, or the results will be more or less disappointing to the grower, whether he desires blooms for exhibition or for home cutting. See, therefore, that the soil is maintained pleasantly moist, and that the top inch or two inches is always like so much dust. When water is required, cut a shallow grip along each side of the lines a few inches away and repeatedly fill with water until enough has been given for the moment; this is infinitely preferable to pouring hard, cold main-water directly on to the bases of the stems of the plants.

GARDENING FOR BEGINNERS.

THE DOUBLE FLOWERED ARABIS.

ARABIS, Wall Cress, or Rock Cress—call it which we may—is a plant that every amateur should grow, both on account of its beauty and usefulness and for the ease with which it may be grown. The double white variety is a great improvement on the single forms, for not only does it create a better effect, but it continues to flower over a much longer period than the single forms. I can imagine no finer sight in the rock garden than a large mass of the double form of *Arabis albida* known as Snowdrift, a well-named variety that flowers in great profusion, and which is the best of all companion plants to the *Alyssum* and *Aubrietia*.

In propagating the double varieties one has to have recourse to cuttings, and these are best taken in late May or early June after the flowering period has passed its best. Cuttings should be inserted in soil of a sandy nature in a partially-shaded border. The cuttings root quite easily, and in an incredibly short space of time every cutting will have made a tuft of healthy green foliage. By the following spring one will be rewarded with good-sized flowering clumps. The double *Arabis* deserves to be more widely cultivated than it is. Not only is it so well adapted for clothing rockwork, as is seen in the above illustration, but it is also an admirable subject for spring bedding when associated with May-flowering Tulips and Forget-me-nots. Moreover, it might be used with advantage more freely for covering the ground surface



THE DOUBLE-FLOWERED ARABIS IN THE ROCK GARDEN.

between groups of tall-growing plants. As a carpet in a bed of standard Roses it looks very well, and even when not in flower its light green foliage is attractive.

BASKET PLANTS FOR GREEN-HOUSES.

A FEW baskets neatly filled with plants, both flowering and foliage, suspended from the roof of a greenhouse or conservatory give to the

structure a thoroughly furnished appearance. If, however, the baskets are badly filled or allowed to become ragged in appearance, they will be an eyesore. Caked moss is sometimes used for lining the baskets, but I do not favour it. I have found from experience that such moss requires most careful treatment, and even then it dies. Of course, the crust keeps the soil from trickling through, but it does not look very attractive. The ordinary loose-growing moss is the best. It must be carefully picked over, all but the live portion being rejected. Suspend the basket in a shed at a convenient height; then commence at the bottom and pack a substantial layer of the moss against the wires, at the same time putting in the compost until the basket is three parts filled. At this stage the plants should be put in and the remaining soil placed around their roots. The moss must come flush with the top of the basket, but the soil should be nearly two inches lower to allow of the necessary watering from time to time, although watering by immersion is often desirable. If the moss is syringed regularly twice every day, it will not only retain its freshness, but grow also. It is a mistake to use a very fine soil in baskets. Fibrous loam with the finest portion sifted out and some half-rotted leaf-soil and a small quantity of well-rotted manure will form a very good and lasting compost.

Suitable Plants.—For the centre of the basket, Fuchsias, Abutilons, Heliotrope, Lantanas and Ivy-leaved Pelargoniums if the latter are trained to a stake or the wires of the basket. Ivy-leaved Pelargonium Mme. Crousse and blue Lobelia look well; so also do baskets of Achimenes. Coleuses, *Isolepis gracilis*, Tradescantias and *Panicum variegatum* are serviceable plants, the last-named two for growing out through the moss at the sides of the baskets.

B,



A CUTTING OF ARABIS ON THE LEFT, WITH A PLANT, SIX MONTHS FROM THE CUTTING STAGE, ON THE RIGHT.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Campanula pyramidalis.—Sow seeds now of this handsome and useful greenhouse plant for producing spikes next summer of both the blue and white varieties.

Canterbury Bells.—These make charming plants for the cool greenhouse to flower next spring, and may be sown in a pot or pan and afterwards pricked out and grown on, or young plants can be lifted and potted from the open ground in the autumn.

Calceolaria Clibranii.—For decorative purposes, both for the conservatory and indoors, this plant is admirably adapted, as the branching habit is most pleasing. The plant is easily raised from seed or cuttings, and if potted on as becomes necessary, make fine specimens.

Gloxinias.—While these are flowering, their season may be much prolonged by giving the plants a warm greenhouse temperature and drier conditions than those afforded during their season of growth, and stopping the use of stimulants.

Primula kewensis.—Seed may be sown now of this pretty and useful hybrid, or the plants increased by division. Throughout the summer months give the plants shade from sun and plenty of air, and as the pots fill with roots, manure-water, properly diluted, will be beneficial.

Fruits Under Glass.

Earliest Peaches and Nectarines.—As the trees of fruit ripen, increase the amount of ventilation and leave air on the top of the house at night. Discontinue syringing the trees, but damp down the paths and borders at least twice daily when the weather is bright. Great care should be exercised in gathering the fruits, as these are easily bruised. The fruits should never be squeezed to ascertain if they are ripe, but carefully lifted upwards, and if ready they will easily detach. If the trees are gone over daily, very few fruits will drop.

Early Cherries.—When the fruits have been gathered from the trees, whether pot or permanent, give the trees thorough syringings again, as oftentimes the absence of such while the fruits are ripening encourages red spider. If the trees are badly infested, the additional use of an insecticide will be found doubly beneficial. If the borders are dry, give a good soaking. Admit abundance of air.

The Shrubbery.

Lilacs.—A collection of these at this season is a grand addition to the shrubberies, and young plants well set with buds may be conveniently lifted and potted in the autumn for forcing under glass. A few of the best would include Charles X., single blue; Marie Legraye, large single white; Souvenir de L. Spath, a fine variety, large trusses of single dark red flowers; Alphonse Lavallée; President Loubet, early, rose purple, double-flowered, handsome truss; and Charles Joly, dark red.

Rubus deliciosus.—Unlike many of the species, this, whether grown as a bush or trained on a wall or pillar, is worth including. Commonly known as the Rocky Mountain Bramble, this shrub produces large white single flowers in great profusion.

The Kitchen Garden.

Tomatoes.—In the majority of places, and especially where the further protection of a wall or fence is afforded, it should be quite safe to plant out of doors after these lines appear in print. Oftentimes a low wall can be well utilised by training the plants in a sloping manner. Avoid the use of manures at the root, give a good watering in after planting, and apply a light mulch of straw material.

Ridge Cucumbers.—These may be planted out towards the end of the month, after having first prepared a bed of long litter and leaves on which has been placed some fairly good soil made in the shape of a ridge and about a foot deep. Plant a yard apart, and keep the plants damped frequently in hot weather. Last season suited these well. In the event of a sunless summer, a cold frame will ensure a supply. King of the Ridge and Stockwood are both good varieties.

Runner Beans.—Where the sowing in pots as was recommended is not permissible, the seed may be sown in the trenches about the end of this month. Well prepare the latter and take out as much of the natural soil as possible, filling in with some well-decayed manure, covering with enough soil to leave a depression for watering. Sow the seeds in a double row and cover with 2 inches of the finest soil. The seeds will not need to be placed less than 6 inches apart. Place a ring of cinder-ashes round each, and, when germinated, dust occasionally in the early mornings with soot.

Parsley.—Keep the hoe going among this crop. Dust occasionally with fresh soot, which not only stimulates the growth of this plant, but imparts that dark green colour and prevents slugs attacking the plants.

The Flower Garden.

Summer Bedding.—The time has almost arrived when this will be in full swing. As quickly as possible remove the plants that have contributed to the spring display, saving any that are wanted for propagation. Well dig over the beds, first giving a dressing of decayed manure. Make a commencement with all the hardiest subjects, and where standards are employed, these can be planted and staked, the groundwork being planted afterwards. The more tender subjects, such as Mesembryanthemum, Ageratum, Begonias, Iresine, Alternanthera and Salvias, should be placed out last.

Dahlias.—These may be planted out, when thoroughly hardened off, into well-prepared, heavily-manured ground. For the back of the herbaceous border, where space permits, these provide a display of flower when many things are past. For cutting in the autumn the Cactus and Pompon varieties are well suited. Only those varieties with strong supporting stalks should be grown for decorative purposes.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Gooseberries.—It is usually important to thin overloaded bushes, using the thinnings for tarts and jelly-making. Industry is the first that needs attention. A look-out for caterpillars must be kept.

Strawberries.—Delay no longer to place straw or litter between the rows of the main cropping and late varieties, in the first place thoroughly hoeing the ground and picking out weeds from among the plants. Young plantations need not be strawed, but runners as they push should be removed. This is quickly performed at this stage, requiring a much longer time if the runners are permitted to extend a few feet before cutting them off.

Hardy Shrubs.

Rosemary.—This succeeds on low walls, and now that the flowers are past it should be closely trimmed with a pair of hedge shears. A constant supply of young plants, either from seeds or cuttings, should be kept up to fill blanks, and these are best grown in pots so that they can be planted at any time.

Lilacs.—These are very early this year, and immediately the flowers are past, the bushes should be examined and pruned as required. Bought plants are usually worked on Privet, which throws suckers; but a stock on their own roots is easy to produce by striking cuttings of the young soft shoots at this time in an ordinary propagating-case.

The Vegetable Garden.

Salsify and Scorzonera.—In our light soil these roots run to flower if sown earlier. The first-named is seeded very thinly, and needs no thinning of the seedlings; the latter needs more space, and the plants should be a few inches apart.

Peas.—A large breadth of Autocrat, The Gladstone, or Sharpe's Queen should be sown at once in trenches if at all convenient. Should the soil be in the least inclined to dryness, thoroughly soak the ground after the trenches have been

prepared and cover the seeds with the unmoistened soil, which should be finely pulverised, to act as a mulch. It is a good plan to put supports to the rows at once, the plants growing so rapidly once they are above ground that it too often happens that staking is delayed, to the injury of the crop.

General Work.—The thinning of seedlings, e.g., Beet, Parsnips and Carrots, will require attention, and the application of surface-dressings of soot, pigeon and poultry manure and superphosphate made to these and other crops. Beans, Potatoes, Cabbages and Cauliflowers will need earth drawn to their stems and the soil loosened between the rows. Transplanted Onions also should have the soil deeply stirred between the rows, and, if needed, surface-dressed with a stimulating manure.

Plants Under Glass.

Cinerarias.—A few seeds may be sown to produce flowering plants in December. They germinate freely in a cool structure.

Primulas.—Old plants of kewensis, verticillata, Forbesii and floribunda may be divided into pieces of a suitable size, placed in small pots, and grown on meanwhile in cold frames. All succeed in a simple compost of loam, leaf-soil and enough coarse sand to ensure porosity.

Malmaison Carnations.—These must be afforded a thick shade in order to secure depth of colour in the blooms, which will shortly expand. Besides thinning the flower-buds it is profitable to reduce the number of young shoots to about half-a-dozen on each young plant, or on each stem of older plants, which results in stronger layers if they are wanted for increase or renewal of stock, and better growths if for bloom the succeeding year.

Begonia Gloire de Lorraine.—Cuttings were very late this year, but the young material should now be progressing rapidly. Much can be done to hasten growth by shifting the plants as they become ready, and not letting them stand unattended for a week or longer. A high temperature with much moisture also conduces to rapid growth. Vaporise occasionally as a protection against mite.

Palms.—The glass in the structure in which these are growing should be heavily obscured, and the atmosphere of the house kept very moist and warm. The plants themselves require much water at the root, and when well established in pots they enjoy a considerable amount of manure dissolved in the water, these conditions resulting in dark green foliage.

The Flower Garden.

Geraniums.—In most localities these still popular plants may be planted into the beds they are to adorn. If the soil is dry, moisten it the day previous to planting, the plants themselves being nicely moistened before starting operations. A slight sprinkling of superphosphate over the surface is beneficial, but it should be very slight. Geraniums are more floriferous if the ground is firm; therefore see that every plant has the soil made quite firm about it as planting proceeds.

Other Plants.—Calceolaria amplexicaulis, Verbenas, Lobelia, Ageratums and Petunias are other plants that may be gone on with, so arranging that those turned out of pots may be planted in the early part of the day, and those from boxes after 3 p.m., thus giving them several hours in the soil before the sun touches them. Salvia fulgens, Begonias, Fuchsias and Heliotropes are examples of plants that it would be unwise to plant out before June.

China Asters.—These, though small, are quite ready to transplant. Ours are lifted from the seed-bed in cold frames, the roots drawn through a mixture of soil and water and planted forthwith. A large number are set apart for filling gaps in late autumn, and are now dibbled into lines a foot apart each way. Some of the singles are invaluable for the latter purpose, both because of their intrinsic beauty and because they flower so late.

Biennials.—Canterbury Bells, Wallflowers, Sweet Williams, &c., sown six weeks ago should be transplanted while yet small, leaving slow-growing things like Campanula pyramidalis some time longer. The ground selected to grow them in should be very fertile in the upper 6 inches and in a nice friable condition. Once planted and watered, as a rule, an occasional hoeing is all they need afterwards.

R. P. BROTHERSTON.
Tynningham, Prestonkirk, N.B.

THE KITCHEN GARDEN.

THE CULTURE OF LATE PEAS.

WITH light soils resting on gravel, for very late dishes I have found it best to sow what may be termed the dwarf earlies, sown in rows not far apart. No staking was done, but the bare soil between the rows in hot or dry weather was mulched with short manure. This was of great assistance in keeping the roots moist, otherwise the crops were a failure.

There need be no waste of land, as it is an easy matter to crop between the rows of Peas. At times the land is too heavy, and if this is so, the cultivator has a splendid opportunity to ameliorate and lighten it. Especially is this the case in most gardens of any size, as with considerable quantities of garden refuse burnt frequently and placed in heaps, this makes splendid material for adding to heavy soil, as it lightens and improves the texture. There are other aids, such as fine old mortar rubble, wood-ashes, broken chalk or lime used at the trenching. The work should be done when the land is fairly dry and not waterlogged. In such land spent manure from Mushroom-beds, old leaf-soil, or anything that lightens and improves, is beneficial.

No doubt the greatest difficulty exists when the soil is very shallow, resting on gravel, and the summer is hot and dry. In the preparation of the land I advise additions of heavy soil, but this in some instances is not always practicable, and other means must be adopted. I would advise growing all the late varieties, if of a medium height, or tall kinds in trenches—I mean varieties averaging from 3 feet to 6 feet—as the soil in the trenches can be made good by removal of the poorer material.

If the Peas are from 3 feet to 5 feet in height, the space should be at least that distance apart between the trenches. If taller, the space should be more, and a liberal amount of good manure worked in the soil at the bottom of the trench, placing over this the top spit or surface soil for sowing the seed.

Sowing.—This should be done carefully. In no case allow the seeds to touch each other. The taller the variety, give more room. Sow in broad-bottomed drills, not pointed. Last summer I noted that dwarf Peas of the Early Giant type allowed to lie on the soil gave a splendid return, as the haulm in a great measure protected the plants from drought, though, of course, there was a little more trouble in gathering the crop. I have not referred to dates for sowing or length of seasons, and these must be governed by the grower according to the time the crop is required and for how long. For instance, for September and early October, or, say, August and September, I should advise the late Marrowfat section, such as those of the Matchless Marrowfat type sown in May and June, and in well-prepared soil early in July. These will give a succession of crops from August to the end of October. In the North I have with very little difficulty had splendid crops till the end of November in a mild autumn. For certain soils I would advise sowing what are termed the first earlies—I mean soil of a poor nature on gravel or chalk—and to liberally manure. Of course, here the rows are much closer together, and due attention should be paid to shade and moisture. Given a good holding soil, there is no difficulty in growing the tallest varieties

for late supplies, such as Ne Plus Ultra, Selected, Gladstone, Late Queen, Alderman and others; but sow thinly and give ample room between the rows. In dry weather mulch between the rows with long litter or spent manure of any kind. This, well watered once or twice a week, will keep the roots healthy and do more good than overhead waterings of a light nature at irregular periods; and if it is impossible to mulch the surface soil all over, much assistance may be afforded by mulching each side of the rows and growing in deep drills or shallow trenches. G. WYTHES.

THE EDITOR'S TABLE.

Paulownia imperialis from Sussex.—Mr. P. Sutherland sends from Sussex flowering sprays of this beautiful tree. As stated in our issue for May 18, it has flowered in several places this year. Mr. Sutherland writes: "I am sending you flowers of *Paulownia imperialis*. The tree is about twenty years old and has just flowered here in Sussex for the first time."

Spring Flowers from Ireland.—The Rev. W. W. Flemyng, Coolfin, Portlaw, County Waterford, sends a beautiful collection of spring flowers. The Iris and Tritonia were particularly interesting. Mr. Flemyng writes: "I am sending for the Editor's table some flowers from my garden. Tree Pæony, two varieties, five others I have being out of bloom, also two herbaceous Pæonies, old double crimson and another. *Viburnum plicatum*, not full size yet or pure white colour, but with that light lemon shade and pink suffusion noticeable before the flowers have attained their full size. Tulips *Erguste*, *Isabella*, *Fairy Queen*, Mr. F. Sanders and Margaret. The finest of the Darwins, *Pride of Haarlem*, is over. *Vitis Coignetia*, just to show the lovely bronze of the young leaf. *Fabiana imbricata* in full bloom. *Magnolia verbanensis*, nearly over, very like *soulangeana*, but, I think, better. *Rhododendrons* *Doncaster* and *Pink Pearl*, too well known to require a word of praise. *Tritonia crocata*, salmon shade. *Iris florentinus*, just beginning to bloom. Two blooms of *double Lily of the Valley*; I think an uncommon plant. Last, but I think not least, some blooms of *Azalea mollis*, of which I have a large bed with over ninety seedlings raised by myself, all in full bloom this year. Although there were many different shades, none of the colours seemed to fight or disagree with the others. There was perfect harmony and delightful contrast."

Rose Foliage from Dolgelley.—Mr. C. L. Cox, Tanllan, Dolgelley, sends some beautiful Rose foliage, and we have never seen better. This year the foliage of most trees and shrubs is particularly large and handsome, the result undoubtedly of the ripening effect of last summer and the copious rainfall of the last winter and early spring. Which Rose in cultivation possesses the largest leaf would be difficult to say, as much depends upon cultivation and pruning. Many of the Hybrid Perpetuals have immense leaves as one year old plants, but we know of none larger than those of the *Gloire de Chedane* Guinoisseau sent by our correspondent, although Etienne Levet and its sport, *Duke of Fife*, will yield very handsome foliage; so also will *Mme. Isaac Pereire*. Some of the Hybrid Teas are particularly superb in this way, Dr. O'Donel Browne, *Marquise de Sinety* and *Joseph Hill* being very remarkable, and we notice you say the first-named is very fine with you. Standard Roses when pruned fairly hard

will certainly yield the handsomest foliage, and, providing good growers are selected, a Rose is seen to great advantage grown in that form. One must not overlook the fact, however, that there is such a thing as having grand foliage at the expense of good bloom. Where nitrogenous manures are used in a too large proportion, foliage is always fine and abundant; but unless the phosphates are in proper proportion, bloom will be much inferior. We cannot agree with our correspondent's suggestion that yellow, mauve and white colours should not appear in the summer, for by so doing we should exclude numbers of the loveliest Roses, to say nothing of other flowers. There is something very soothing about yellow and white shades, but garish reds and scarlets upon a hot day are not pleasant to all. Colour-schemes may be all very well with perennial and annual plants, but we think Rose-lovers would miss much pleasure if they adopted it to any slavish extent. Mr. Cox writes as follows: "This year the foliage on my Roses is particularly large and plentiful. I enclose a few specimens for your inspection and an ordinary Rose leaf and Strawberry leaf for you to compare the sizes with. I should like to know which Rose in cultivation is supposed to have the largest leaves, if you can tell me. The Roses in my garden which at present have the finest foliage are the following: Mrs. Isabelle Milner, Mme. Jules Gravereaux, Lady Waterlow, *Pharisaër*, General Macarthur, Mrs. Ben Cant, Hugo Roller, Melanie Soupert, Mme. Jules Grolez, Lady Ursula, Dr. O'Donel Browne, *La France de '89*, *Souv. de S. A. Prince and Walter Speed*, all of which are in splendid condition, with dense masses of leaves of beautiful colour and texture, and full of buds just breaking. Most of them are standards, the only form of Rose plant I really like. These I have on the edges of lawns, with *Violas* in a circle at the base of each tree. My climbing Roses are on old Apple trees roped together and Clematises of different shades planted with them, so that they all scramble up together. There is no more effective colouring than pink and blue in a garden, to my mind, unless it be yellow, mauve and white in the spring; but the latter colours should not come forward again in a garden until the autumn, I think, and white should at all times be avoided as much as possible."

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATE.

Cymbidium woodhamsianum Fowler's Variety.—A showy variety with amber-coloured petals and sepals. The lip is of a paler hue, tipped with chocolate. Parentage: *C. lowianum* × *C. eburneo-lowianum*. Shown by J. Gurney Fowler, Esq.

AWARDS OF MERIT.

Lælio-Cattleya Apollo.—A truly beautiful variety raised from *Cattleya Schröderæ* × *Lælio-Cattleya warnhamense*. The pale orange-coloured petals harmonise with the lovely mauve-tinted lip. Shown by C. J. Lucas, Esq.

Tropæolum albiflorum.—A frail-growing climber or twiner having glaucous three to five parted leaves, the leaflets linear and half an inch or more in length. The flowers, which are pinky white, with orange yellow base, are nearly erect, open funnel-shaped and 1½ inches long. A pretty and distinct species. Exhibited by Miss Willmott, V.M.H., Warley Place, Essex.

Petunia Brown's Purple (Strain).—The award in this instance was given to the strain, the exhibited examples betraying slight variations of colour, which is of an intense royal purple. Should the variety come true from seed, or nearly so, it would prove of much value for window-boxes and the like. The flowers are single and of large size. Exhibited by Messrs. W. and J. Brown, Peterborough and Stamford.

Phyllocactus Coopermannii (P. Ackermannii major × P. Cooperi).—A variety of huge proportions and of bronzy scarlet colouring, the outer sepals shading to a dull brick red. It is a very handsome form.

Cereus amecænsis.—So far as we remember, no species of this genus has been honoured by an award for many years, a fact in measure due perhaps to the fugitive character of the flowers. That now shown had large and handsome flowers of spotless purity, which issue freely from the sharply-angled, erect-growing stems or branches of which this species is composed. These stem-growths as exhibited were several feet in length, some of the expanded flowers appearing low down, though several other almost fully-grown flower-buds appeared near the summit of the stem. These two excellent novelties were shown by Mr. A. Worsley, Isleworth.

The foregoing were shown before the Royal Horticultural Society at the meeting held on May 14.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

DELPHINIUM LEAVES INJURED (Churchill).—The Delphinium leaves have the appearance of having been injured by cold winds or frost. No fungus or insect is present to account for the blackening.

WALLFLOWERS FAILING (Enquirer).—The plants present the appearance of having been attacked by the fungus known as rot-mould, the simplest remedy for which is to lift and burn, soil and all, and avoid planting these and Stocks in the same ground for some time.

NARCISSUS DISEASED (A. E.).—There is a slight attack on the foliage of the Narcissus of the fungus *Ramularia mallicumbrosæ*, and spraying with potassium permanganate will, no doubt, check the spread of this fungus. The main thing, however, that requires attention is the exhaustion of the soil, or, rather, the too close packing of the young bulbs which have formed since the plantation was made ten years ago. In dry seasons the supply of water is sure to be somewhat limited, and there are tremendous demands upon it when the bulbs are packed so tightly as these are in the present case. It is, therefore, likely that the leaves will suffer from want of water.

TREATMENT OF FLOWER-BED (H. D. R.).—The most profuse-flowering plants we know are Ivy-leaved Pelargoniums in pink and red shades; Ageratum, with a foot-wide border of white Violets; Heliotrope, similarly treated, or white, crimson, scarlet, pink and orange tuberous Begonias. Say, for example, you arranged a yard-wide centre of white Begonias, and set the remaining shades equally in triangular outline around. A simple and pretty bed would be one of Summer Cypress (*Kochia*) in the centre, pink Ivy-leaved Pelargoniums around, save for a foot-wide margin, to be finally planted with white Violas. In this arrangement the Pelargoniums would first require to be

pegged down to cover the soil, subsequently allowing the plants freedom of growth and flowering. The Heliotrope alone makes a fine bed, and the flowering is continuous, and where fragrance is cherished it is one of the best. The thing to avoid is too many plants of undecided colours.

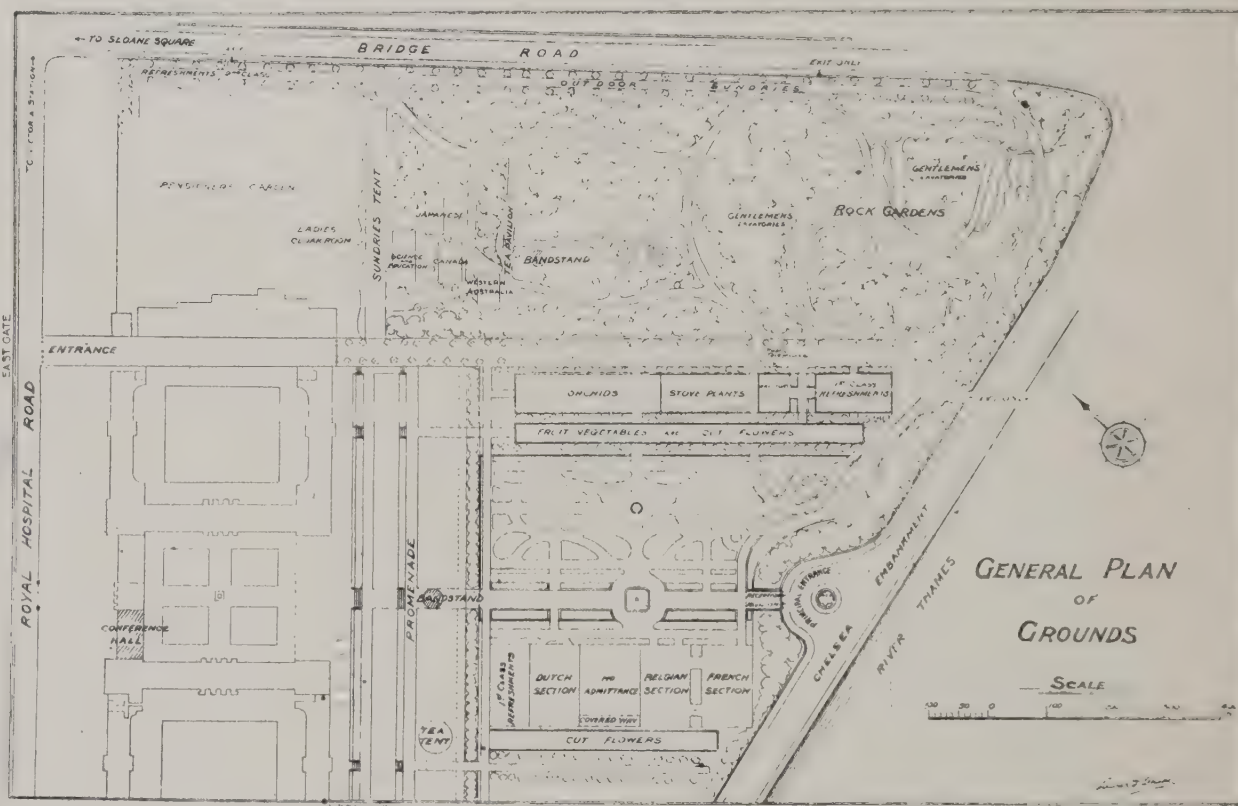
TULIPS DISEASED (Denbury).—The Tulips are attacked by the well-known Tulip fungus *Sclerotinia parasitica*. The spores of this appear to attack plants most easily when the latter have been weakened by frost. No cure is known, but the fungus forms black, hard masses, called sclerotia, by which it passes over the winter. It would be well to remove all the decaying leaves as soon and as completely as possible, dig up the bulbs and clean them thoroughly of earth, and search for these little black resting bodies, which vary from the size of a pin's head to that of a Pea, if it is desired to plant them again this season. A new site should be chosen.

SERIES OF PLANTS FOR TUBS (M. D.).—After your Rhododendron is past you may for a time depend upon tender subjects, such as flowering Cannas, Fuchsias and the common Hydrangea. Then in August a succession can be kept up by the creamy white flowered Hydrangea paniculata grandiflora and the lavender blue *Perowskia atripliciflora*. After these come the blue-flowered *Ceanothus Gloire des Plantières* and the pink-flowered *Ceanothus Marie Simon*. These, with the purple *Veronica speciosa*, will last well towards the end of September, to be followed by *Desmodium penduliflorum*, a pretty Pea-flowered shrub with purple blossoms. After this is over we can recommend a berried *Aucuba*, which will last until the *Laurustinus* and *Winter Jasmine* come in. This *Jasmine*, though usually grown as a climber, may also be treated as a loose bush. Besides the above-named shrubs, some herbaceous

reclothe the branches, whereas now a considerable amount of new wood has already been made. Clip it back as hard as possible, so that the main branches are kept close to the wall.

PROPAGATING HARDY HEATH (B. L.).—We are afraid that you will not be able to purchase seeds of *Erica Veitchii*. Why not propagate it from cuttings? Very satisfactory results may be obtained by taking cuttings in July and August and inserting them in pots of sandy peat made very firm. Insert the cuttings firmly and stand in a close and slightly warm frame, or case, until rooted. If a bell-glass is placed over each pot of cuttings in the case, roots will be formed more quickly than if the cuttings are allowed a greater amount of air. Keep the young plants in a cold frame or sheltered border in April. Seeds of conifers may be obtained from Messrs. Dicksons, Limited, Chester; Messrs. Little and Ballantyne, Carlisle; and Messrs. Wiseman, Forres, N.B.

TIMES FOR TAKING CUTTINGS (E. P. K.).—Cuttings of *Forsythia* may be inserted at once in a cold frame or a slight hot-bed. Cuttings of Rambler Roses, Hybrid Tea Roses, *Ceanothus* and *Cotoneaster* should be taken during July and August, and be inserted in pots of sandy soil in a close and slightly warm frame. *Cistus* cuttings may be taken at the same time, and either be placed in gentle heat or in a cold frame. Under either condition, however, they must not be allowed to become very wet. Brooms, as a whole, are better increased by means of seeds than by cuttings. Cuttings taken during July and August, however, can be rooted in a cold frame. *Staphylea* and *Cotoneaster* cuttings may be rooted in gentle heat during July and August. Cuttings of *Aubrietia*, *Alyssum* and *Pinks* ought to be inserted at once, either in a cool shaded



GROUND PLAN OF THE ROYAL INTERNATIONAL EXHIBITION.

subjects may be grown, as Michaelmas Daisies do well in this way, and are especially valuable in the autumn, while last season we saw a pot specimen of the warm terra-cotta-coloured *Helenium Riverton Gem*, which flowered throughout the month of August and well on into September.

DISEASE AMONG ANEMONES (N. G. H.).—The fungus attacking the Anemones has hitherto been known in this country as *Æcidium punctatum*, and now as a form of the Plum rust, *Puccinia pruni*. So far as we are aware, it is likely to attack any form of *Anemone coronaria*. The spores formed on the Plum leaves (teleutospores) in late summer, and falling to the ground with them in autumn, are the source of infection of the Anemone in the spring. It differs from *Æcidium leucospermum*, which occurs on the Wood Anemone, and the alternate host of the other, if it has one, is not known. If the Anemones are so poor, it would be well to destroy them. Probably spraying in spring with a rose red solution of potassium permanganate, or with ammoniacal copper carbonate, would check the attack on the Anemone, while affected Plums may with advantage be sprayed with Bordeaux mixture.

TREES AND SHRUBS.

PRUNING HOLLIES (E. P. K.).—Hollies may be pruned any time between the present and the end of August; the earlier the better, however. Do not clip them in a formal manner, but reduce the overgrown parts by drawing some of the longer shoots out. These remarks do not, of course, apply to hedges and formally-grown trees. It is usually as well to keep the lower branches free from the ground. Ivy should be clipped at once; in fact, it is already a little late. April is a good month, for it may then be clipped severely, and new leaves will appear almost at once to

border out of doors, or, better still, in a cold frame. Rosemary and Lavender cuttings may be inserted in a cold frame during August, or earlier if you like. Pansies may be rooted any time between the present and September, either in a bed out of doors or in a cold frame. Winter Sweet is very difficult to root from cuttings, and you would do better to layer some of the lower branches at once. Almond trees are usually grafted or budded upon Plum stocks. You will not do much good with them from cuttings. Some of the subjects mentioned above may be rooted in an open border, but the results are usually less satisfactory than when a frame is used.

ROSE GARDEN.

DESTROYING RED RUST ON ROSES (A. M. G.).—Red rust, or orange fungus, can more readily be prevented another season if all leaves that are attacked be gathered up in autumn and burned. If this were thoroughly done, no infection would take place the following season. It is well to spray the bushes as soon as the foliage appears in the spring with sulphide of potassium, 1 ounce to two gallons of water, and as the foliage strengthens a stronger dose may be used. As your Scotch Briars are by this time well developed, you can safely use the stronger solution. This is best applied with a sprayer, one known as the "Alpha" being an excellent article. If Rose-growers would use a sprayer early enough and continue spraying throughout the early stages of growth, far less trouble from insect and fungoid pests would be experienced; but it is almost hopeless to attempt a cure when the attack has been allowed to gain the ascendancy. To trap field-mice we have found narrow-necked pickle jars half filled with water and sunk in the ground up to their rims to be very good. There are also some excellent poisons on the market for destroying mice and moles, for which we would refer you to our advertising columns.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

A Correction.—In our issue for last week the names of two of the directors of the Royal International Horticultural Exhibition, on page 254, were placed under the wrong portraits, due to the transposition of the blocks. These were Mr. A. C. Jackman and Mr. Hubert J. Greenwood, J.P.

Cornus florida rubra.—This is a handsome free-flowering Dogwood with creamy white flowers surrounded by red bracts, which makes it very interesting. In the autumn they turn a deep crimson and last a considerable time on the tree. *Cornus Nuttallii* has been grand this season.

The Labrador Tea (*Ledum latifolium*) is a very pretty plant and in cool spots will bloom profusely. It grows from 2 feet to 3 feet in height. The flowers are white and produced in terminal corymbs. It is a perfectly hardy, neat-growing shrub and an old one, but is seldom seen now. It succeeds best in cool, peaty soil.

Enkianthus campanulatus.—This is a rare deciduous Japanese shrub, growing about three feet to four feet. When it is in flower it is very beautiful, as it bears clusters of dark red, waxy, bell-shaped flowers, and in the autumn the small foliage turns a beautiful red. This is an excellent plant for choice positions and as dot plants in the alpine shrubbery. *Enkianthus japonica* bears white flowers with scarlet foliage in the autumn.

A State Diploma for Horticulture.—An important statement was made by Mr. Walter Runciman, M.P., in his speech at the jury's luncheon at the Royal International Horticultural Exhibition. The Minister for Agriculture advocated (and practically promised) a State diploma for horticulture in this country, a hint that was heartily approved. The necessity for such a diploma has long been felt, and never more so than at the present time.

The Snowdrop Tree (*Halesia tetraptera*).—This has been in perfect bloom, and is a tree that cannot fail to bring forth admiration. The flowers are snow white, drooping on the under side and all along the young branches. There are several trees at Leonardslee that have huge heads about twenty feet high, and each season at pruning-time all the vertical growths are taken off so that the flowers are in character with the drooping foliage. It is a native of the river banks of North Carolina. Any soil seems suitable for its cultivation.

Corokea Cotoneaster.—This is a very curious New Zealand plant, sometimes called a dwarf, but plants 6 feet to 8 feet in height and still growing are not uncommon. The branches zigzag and

entangle in a very attractive manner. The leaves are small and white on the under side. The flowers are yellow and like little stars, and are produced very freely; in fact, it proves one of the most striking plants in the garden just now. It is quite hardy, though it is often supposed to be a tender subject. *Corokea buddleoides* is quite a tender plant and must not be confused with the above; it is not half so attractive either, though it is often sent out as *Cotoneaster*, but the plants are widely distinct.

The Cricket-bat Willow.—Remarkably high prices are obtained for the special forms of *Salix* whose timbers are most prized by cricket-bat-makers. There is no doubt, says a writer in the current issue of the *Kew Bulletin*, that the timber of rapidly-grown trees is better for the bat-makers' purpose and of greater value per cubic foot than that of slowly-grown, comparatively stunted trees, which is contrary to what obtains with timbers in general. The best bat-makers' timber is that in which the annual rings are not less than half an inch wide. Trees on poor or comparatively dry ground will bring in neither so quick nor so large a return per cubic foot of timber as those grown on better, moister soils. This is a matter that should receive attention when a site is selected.

Hippeastrums at Glasgow.—There is a capital collection of *Hippeastrums* in the Botanic Gardens, Glasgow, where, from a good number of varieties of the best modern type, a great many seedlings have been raised and the best carefully selected. They are well cultivated here, and are highly appreciated when in bloom by the many visitors to these Botanic Gardens, which, by the way, are maintained by the Corporation of Glasgow, and are well managed by Mr. James Whitton, the superintendent of parks, who is also curator of the Botanic Gardens. Mr. Rorke, an old Kewite, looks well after the plants in the houses, and he and his staff deserve much credit for the *Hippeastrums*. All the best colours are represented, and the groups are much admired.

Dendromecon rigidum.—For sheltered positions this somewhat rare shrubby plant is strongly recommended. Its yellow Poppy-like flowers are freely produced when it becomes established, and after being once planted it should not be removed, for it resents any disturbance at the base. The soil should be of a loamy nature, rather light and rich, while during a dry summer the roots may be mulched with partly-rotten manure. Propagation is effected by means of cuttings from shoots that are not too sappy. Each cutting should be placed singly in a small pot and kept in a frame till rooted. It is a difficult subject to increase, which probably partly accounts for its being rarely seen.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Darwin Tulip Clara Butt.—I saw a nice lot of this fine Tulip in a large garden the other day. There it is still highly prized as perhaps the most beautiful of its colour—a soft delicate rose with a slight blush tint on the outer segments. It well deserved the honour of being figured in the coloured plate of *THE GARDEN* for April 15, 1905, and the first-class certificate of the Royal Horticultural Society a few weeks later. It is not only delightful in its colour, but is most shapely in form; and in beds or lines, as well as in groups, it is not easily surpassed by any of this most useful class of Tulips. —S. A.

A Pretty New Fuchsia.—The new Fuchsia Benita, which is referred to in a leading note on page 237 of *THE GARDEN* for May 18, is indeed a charming one, and I can fully bear out all that is advanced in its favour. I saw a number of plants of this staged at a show, and took notes of it at the time. I also feel sure that it will receive an award in due course, as it is of so much more worth than some varieties already honoured. Judging from the general appearance of the plants, they will prove useful in pots and baskets, as well as planted out. The gardening public should see more of this charming Fuchsia.—G. G.

A Champion Sweet Pea.—One commonly hears enquiries for the most vigorous-growing Sweet Peas. Last year in Messrs. Dobbie and Co.'s seed farms at Marks Tey, Mr. Andrew Ireland noted a plant of Mrs. Cuthbertson the flower-stems of which each carried five blooms. The seeds were specially saved and sown. Among the progeny there is, or was on May 11 of this year, one plant carrying stems bearing respectively four, five, six, seven, eight and nine blooms. Seeds saved from this champion should next year give plants bearing anything up to eighteen blooms on a stem. Will this be the case? Messrs. Dobbie and Co. will doubtless be able to supply the wherewithal—seeds—to make the test.—H. J. W.

Wistaria sinensis.—The beautiful and fragrant flowers of the Wistaria are this season exceptionally fine. Here we have a very old specimen that occupies a warm position sheltered from the north-east winds, and at the present time it is a very pleasing sight, the blooms all over the tree being fully expanded. Last year the bunches of flower-buds were greatly injured, and only at intervals where the trusses were snug to the wall did the flowers open at all satisfactorily. The propagation of this Wistaria is not at all difficult, and anyone wishing to raise a few plants from any particular specimen can quickly do so by layering the young growing shoots, as almost every bud will form a plant.—H. MARKHAM, *Wrotham Park Gardens, Barnet.*

Phlox amoena.—Having recently seen a good mass of this charming little flower, I was reminded that it is not always easy to grow with success. I am writing of what I find the best treatment. The position of this class of Phlox means a good deal, and the general advice given is that all the alpine species require a sunny position. This recommendation holds good for such as *P. divaricata*, *P. stellaria* and *P. subulata*, which seem to revel in the sunniest position in the rock garden. With

P. amoena I have found that the brightest sun is not so good, but a slope to the north or north-west is much more suitable. In this position the plants make strong growths, which do not get burnt up as they do on the southern slope, and the plant is apparently much more at home in the partial shade, provided it is also out of any dampness during the winter months.—A. T. C.

Shrubs Under Trees.—In front of our County Hall at Kingston is a group of tall old Elms that many years ago were beheaded, and now have heads of dense growth, so that all beneath is literally shrouded. But, worse still, the soil is a mass of Elm roots; hence it is a matter for wonder how any shrubs can possibly exist planted close to the trees. It is just now most interesting to note in such a hungry, shaded position a handsome specimen of *Cytisus scoparius andreanus* quite a mass of flower, also full of good foliage. Evidently this is a Broom which in such root-eaten soil may be largely planted. Close by Box does well, also *Berberis stenophylla* (quite a nice dense, robust plant) and *Berberis Aquifolium*. How these shrubs managed to exist as they did through the intense drought of last summer, and now are in really luxuriant growth, presents a problem. Evidently they like the root dryness of the position. The Elms are within 4 feet to 5 feet of the shrubs below; hence it is seen that the root area must be a mass of fibres.—A. D.

Exhibition versus Private Garden Flowers.—In reply to "B.'s" criticism of my note, I think he has not quite understood it. I did not intend to decry professional florists' exhibits, which are usually most interesting, but only the general tendency to show flowers which mislead and grievously disappoint the unwary amateur. The herbaceous flowers staged at exhibitions do "suggest cut-and-come-again," and all too frequently fail to carry out that promise or have some fault that unfits them for small gardens, and so they delude and disappoint the ignorant amateur. Take, for example, Sweet Peas; the shows do not tell us that several of the "show" flowers require to be shaded to preserve their colour, and who of us wants to make our little gardens look like a laundry drying-ground? The Rev. J. Jacob shows an uncanny gift of reading between the lines, and sees that the poor amateurs want "someone who knows the way" of the Daffodils and other flowers to tell us which are likely to thrive in our gardens. I wish he would help us to a good, late, deep yellow trumpet for the garden. We have plenty of pale Narcissi at a poor man's price, but I fail to find a flower of a deep yellow akin to *N. bicolor grandis*, which is a joy to me with its happy, healthy flowers and foliage.—AN AMATEUR.

Hyacinths and Abutilons.—On page 238 of *THE GARDEN*, issue May 18, "C. T." refers to my notes on Abutilons under the above heading, and asks whether I have tried any of these plants in the flower-beds. My reply is Yes; I have grown them as dot plants in many large beds, and associated with other kinds of plants in sub-tropical bedding schemes. My article in *THE GARDEN* of May 4 dealt with the usefulness of the plant under glass. In North Lancashire and in Hampshire I have grown the Abutilon in the flower-beds, with very satisfactory results. The chief point is the due hardening of the plants before they are put out, so as to avoid the loss of basal leaves. In

the London and other parks Abutilons are often very extensively employed in the bedding-out schemes. I have seen them so grown, with charming effect, in Hyde Park. The variegated forms are the most useful for such work.—AVON.

—As stated by your correspondent "C. T.," page 238, the employment of Abutilons for decorative purposes need not be limited to the indoor garden, as in the open ground they may be advantageously treated in various ways. Now that beds of mixed subjects (some of them in the shape of good-sized plants) are so popular for summer bedding, the Abutilons are of great service, and in some gardens are freely used in this way. Of variegated kinds, Abutilon Thomsonii, of upright growth, the lobed leaves of which are freely mottled with yellow, is especially effective as a dot plant, while another frequently met with is the rambling-growing *A. vexillarium variegatum*, which has small deep green leaves freely marked with gold, and red and yellow blossoms. This is often grown as a standard, under which conditions the semi-pendulous shoots show themselves to advantage. Souvenir du Bonn has large lobed leaves margined with white, while Sawitzii is a good deal in the same way, but less vigorous in growth and with a much greater amount of white in the leaf. The flowering varieties mentioned by your correspondent "Avon" all do well out of doors during the summer. One purpose, however, not referred to by either of the previous writers, and for which I consider some of the Abutilons particularly adapted, is for clothing the roof or rafters of a greenhouse. In this way the blossoms, owing to their strictly pendulous nature, are seen to very great advantage, while, what is also of considerable importance, they are produced throughout the greater part of the year.—H. P.

The Streptocarpus in South America.—Having read the interesting article on the cultivation of Streptocarpus in *THE GARDEN* for February 24, I thought perhaps you might be interested in a photograph of a group of these plants, taken about the middle of February (Midsummer). They are undoubtedly among the finest greenhouse flowering plants one could wish to grow. Here we have a small house holding over a hundred plants of Streptocarpus, intermixed with the same number of Asparagus plumosus, the first-named in 4-inch to 8-inch pots, and the latter in 3-inch pots. The effect is charming. The colours range from white tinged with blue and purple, lavender, and blues down to deep purple, also a few plants of a distinct rose tint. At the present moment the strain known as Cirrus is in full bloom. More delicate-shaped flowers one could not wish to see. They resemble a Cattleya more than any other flower I have seen. The size of these flowers ranges from 2½ inches to 3½ inches across. The cultivation of these plants is carried out on the same lines as those of your correspondent, with one exception, and that is the damping overhead. During the hot summer months (when the glass is at 90° in the greenhouse and falls to 85° in the afternoon) we have always damped the foliage in the afternoon, and so far have had no bad results from such treatment. If plant-lovers in the Colonies or any foreign country could be induced to send you short articles on plant species and their cultivation, it would be a great help to the public at large.—A. O. LOTEN, *Quinta de Browning, Roldán, F. C. C. A., Argentine Republic, South America.*

Coronilla glauca Flowering Outdoors.—I am interested in the notes about *Coronilla glauca* which have appeared in THE GARDEN within the last few weeks, and I enclose a photograph of a specimen of it growing in the garden here, and which, at the time it was photographed about three weeks ago, and for a considerable time previous to it, was a complete mass of flower. It is growing at the end of a plant-house, and, consequently, protected by it, and measures 9 feet across and about four feet in height. Of course, the winters here are not so severe as on the mainland, as large trees of *Magnolia grandiflora* grow well in the open, as may be seen in the photograph, and Myrtles, which usually need the shelter of a wall, grow here unprotected.—A. E. P., *Ryde, Isle of Wight*. [Unfortunately, the photograph was not suitable for reproduction.—ED.]

Exhibiting Daffodils.—I am much interested in the discussion on the above subject, and particularly so in several points in Mr. W. A. Watts' letter, page 226, issue May 11. With regard to the artistic arrangement of the cut flowers in competitive classes, I affirm it is of very secondary importance. A judge wishes to be able to see the points of every bloom at a glance, and is annoyed with anything that obstructs that clear view. If neatly arranged, both flowers in pots and cut in vases are artistic enough, and their value for garden decoration and market purposes can easily be appraised by the public. I, too, dislike the paper collars and any faking of the blooms. I once saw an exhibitor, just before the judges came round, deliberately tear away the fringes (faded) of a number of trumpets, and the judges, one a noted enthusiast, awarded the first prize to the collection including the faked flowers over others fresher and more meritorious.—B.

The Snowball Tree in Ireland.—I send two of the largest blooms of Guelder Rose (*Viburnum Opulus*) I have ever seen. They were grown in the garden of one of my parishioners. I have taken very accurate measurements of both of these blooms. One measures in circumference 15½ inches, the other 16 inches. They were grown on a tree about fifteen feet in height. These gigantic blooms were both at the extremities of high branches. A very large number of flowers were in bloom, but the two I send dwarfed all the rest. I was given a bloom of *V. macrocephalum* this year. I was anxious to see it, as my plant did not flower. This species is said to be the largest flowered of all the *Viburnums*, but the flower kindly sent me was a pigmy beside the two Goliaths I send. The Snowball Tree is one of our best and most beautiful shrubs, as hardy as an Oak and as free-flowering as Whitethorn. It ought to have a place in a collection of flowering shrubs, no matter how small the collection may be. It is a thing of beauty and a joy for ever.—(Rev.) WILLIAM W. FLEMING, *Coolfin, Portlaw, County Waterford*.

FORTHCOMING EVENTS.

June 4.—Royal Horticultural Society's Meeting and Exhibition of Rock Plants. Masters' Memorial Lecture at 3 p.m. by Professor Bayley Balfour, F.R.S., V.M.H., on "Problems of Propagation." Scottish Horticultural Association's Meeting.

June 6.—Linnean Society's Meeting. Burnley Horticultural Society's Meeting.

June 8.—Stirling Horticultural Association's Meeting.

THE ROSE GARDEN.

DECORATIVE ROSES FOR THE HEARTH.

AN arrangement of Roses in the fireplace during the summer months is greatly appreciated, and much improves the general appearance of a room. The decoration rests on the style of fireplace; but whether an Adam, Georgian or old-fashioned ingle-nook, Roses can be arranged to suit all, and when the



CHERRY TREES IN POTS SHOWN AT THE INTERNATIONAL EXHIBITION BY LEOPOLD ROTHSCHILD, ESQ. (GARDENER, MR. J. HUDSON, V.M.H.)

grate is not attractive, a pretty fire-screen can be utilised. A screen, if used, should have a mirror; it will reflect a portion of the flowers and give an added coolness to the arrangement. Place the screen in the centre of the fireplace, and arrange vases of various height on each side and in front, filling them with water.

Next cut the blooms and foliage required, and set to work at once, taking care to nip a little off the stem of each before placing it in a vase; they last much longer when this is done, and one cannot expect the best results if the blooms are lying

about for an hour without water. If the fireplace is a large one, taller vases must be used and a big bowl placed in the grate. Where possible, the flowers can be arranged from the left side of the fender to the mantel-piece, finishing up the side of the mirror with a long flowering spray of one of the *wichuraiana* Roses, which will be prettily reflected again in the room.

The colour of the room must also be considered. Take care that the Roses used blend or contrast; a glare must be avoided. In rooms where blue, green or lighter colours predominate, Dorothy Perkins and Crimson Rambler are quite at home; but do not use them when the tone is red. Always bear in mind that the key to a successfully-arranged hearth is lightness.

One of the first Roses available after fires are dispensed with is *Una*. Cut long sprays with buds and open blooms, and arrange lightly with foliage of the *wichuraiana* Rose *Jersey Beauty*. *Juliet*, with foliage of *Alberic Barbier*, and *Beauté de Lyon*, with foliage of *Jersey Beauty*, are two of the early Roses especially noticeable because of their unique colour, and are really very elegant when nicely set up.

Electra, *Tea Rambler*, *Queen Alexandra*, *Blush Rambler* and *Alexandre Girault* come next, the latter being early and one of the finest of the *wichuraianas*. When the foliage of the variety used is not decorative, add sprays of one of the *wichuraiana* Roses. *Irish Elegance* and *Lyon Rose*, with foliage of *Alberic Barbier* and long sprays of *rubrifolia*, once seen will never be forgotten. An arrangement of tawny yellow Roses of all shades was greatly admired; they were *Melanie Soupert*, *Marquise de Sinety*, *Lady Hillingdon*, *Mme. Ravary*, *Duchess of Wellington*, *Harry Kirk*, *Mrs. Aaron Ward*, *Arthur R. Goodwin* and *Miss Alice de Rothschild*, with long flowering sprays of *Shower of Gold*. This arrangement is greatly improved if a few blooms of the famous new *Rayon d'Or* can be found for the mantel-piece. Then we have *Dorothy Perkins*, *White Dorothy*, *Excelsa*, *Hiawatha* and several others of this tribe. All of them can be cut long, and last well in water.

When the ramblers are over, an arrangement of pink blooms is very attractive. *Lady Ashtown*, *Caroline Testout*, or any good pink, with a few blooms of the single Rose *Dawn* and sprays of *Alberic Barbier* and *rubrifolia*, *Mme. Abel Chatenay* buds and open blooms, with trailing *wichuraiana* foliage, are really charming. An arrangement of dark Roses, with *Hugh Dickson*, *Edward Mawley* or *W. E. Lippiatt* and the deep velvety crimson single Rose *Maharajah*, *wichuraiana* foliage and long sprays of *sericea Pteracantha*, is another success, the handsome red thorns of the latter showing up daintily among the shining leaves. E. E. F.

FEEDING POT ROSES.

THERE can be little doubt that Roses enjoy an extended rootrun, so they need considerable help when confined to the limits of a pot. In addition to a rich compost, they can be assisted by liquid manures. In fact, the judicious application of these is a great feature in their successful cultivation, and deserves a few words.

In the first place, I do not know of many subjects more easily suited as regards manure than Roses; but, like most others, they have some special favourites. Then we must perforce consider whether they are being grown for profit alone or for the adornment of the greenhouse and conservatory. It would be quite out of the question to use such manures and in the same way among

the latter as is often practised with market Roses, where we can mulch heavily among the pots and use more crude manures upon the surface of the pots than could possibly be the case in a private establishment. Personally, I have little doubt but that the Rose foliage feeds very considerably upon the ammonia arising from the manures. It gives more substance or texture to the leaves, and appears to keep the whole in better health and vigour, always provided it is not over-strong and the house is kept closed. I fancy, too, that insects have less effect; certainly we do not find red spider.

But my chief aim is to make a few comments upon the feeding of pot Roses as cultivated in private gardens, and, of course, we cannot employ

manures for pot Roses. The soot must be put into rather a fine bag, or there is apt to be a most objectionable scum on the top. A. P.

VEGETABLES AT THE INTERNATIONAL SHOW.

THE premier position for vegetables, in the opinion of those best qualified to judge, was easily secured by Mr. Edwin Beckett, gardener to the Hon. Vicary Gibbs, Aldenham House, Elstree, Herts, with a remarkable collection of subjects for so early in the season. Cultural skill of the highest degree of perfection was displayed in the



GROUP OF RHODODENDRONS SHOWN BY MESSRS. JOHN WATERER AND SONS AT THE INTERNATIONAL SHOW.

such methods there. A sprinkling of Clay's or Standen's manure upon the surface, having previously stirred over the latter slightly, does lasting good through washings by frequent water supplies. If a little light loam is placed over the manure, the whole has a fresher look and the presence of manure cannot be detected. It is seldom possible to remove surface soil from a well-grown pot Rose, because of the feeding roots so near to the top; but if the pots are not filled up quite so much at first, there will be useful room available for a fair mulching of some richly-prepared compost, and I have found the new roots simply revel in this, which must, perforce, be beneficial.

Liquid manures take a great place in the feeding of pot Roses. They are easily applied, and most establishments can get one of the most useful. Drainings from the cow-stall or those from the stock-yard are very satisfying. But one need be careful as to the strength when using, never losing sight of the fact that it is not only safer, but decidedly more beneficial when applied more freely, but in a weaker solution.

Guano may be used at the rate of 1½ oz. to the gallon three or four times a week. Of course, it is understood one will make some allowance for the comparative size of pot and plant.

A bag of horse and sheep manure, with a little soot, may be placed to soak in a tank or tub, and will result in a liquid manure free from any scum or sediment. This is more pleasant to use than that from farmyard drainage. As a matter of fact, I have found soot-water one of the best of all liquid

many vegetables staged by this well-known grower on a space 100 feet square. Varieties and kinds were very numerous, and they were set up in the inimitable way that this leading exhibitor has shown is possible for those who care to take the necessary trouble entailed. Everything was in the pink of condition, and among the many indispensable subjects worthy of special notice were Seakale, Asparagus, purple and white Aubergines, Peas and Beans in variety, Celery, Beet, Cauliflowers, Carrots, Tomatoes, Turnips, Cucumbers and a lot of other useful and popular vegetables. Dainty indeed was the setting up of this wonderful collection, and there is little doubt this exhibit afforded much interest for visitors, and also for those who devote themselves especially to vegetable culture.

The lady gardeners from the Thatcham School of Gardening, Berks, were evidently trying to emulate the exhibits from Aldenham House Gardens. On the present occasion their exhibit covered 50 square feet, and the produce staged by these ladies did them very considerable credit. Some thirty to forty different subjects and varieties were set up, embracing such vegetables as Cauliflowers, Cucumbers, Carrots, Onions, Potatoes, Turnips, Cabbages and other subjects, such as Lettuces, Radishes, Tomatoes, &c., all looking extremely well and evincing good culture. The grouping of the different vegetables and the comprehensive character of the display were highly praiseworthy.

Class 399, for twelve distinct kinds of vegetables, brought out three competitors, the produce in each

exhibit being exceptionally good for so early in the season. Asparagus, Peas, such as Duke of Albany and Centenary, Potatoes Ideal and May Queen, Tomatoes Winter Beauty and Perfection, Globe Beet, Flower of Spring and April Cabbages, Late Queen Broccoli and Magnum Bonum Cauliflowers, Improved Telegraph Cucumbers, Princess of Wales French Beans and Early Red Milan Turnips were all noteworthy.

There were only two entries in the class for nine vegetables distinct, and both were highly creditable. Giant French and Perfection Asparagus, Winter Beauty and Satisfaction Tomatoes, First Crop and Magnum Bonum Cauliflowers, Matchless and Pride of the Market Cucumbers, Exhibition Peas, Moore's Cream and Sutton's Cream Marrows, and Early Gem and Champion Scarlet Horn Carrots were splendidly staged.

Only one entry was forthcoming in Class 401 for six vegetables distinct, May Queen Potatoes, Sutton's Favourite Carrot and Magnum Bonum Cauliflower being the more meritorious.

Three exhibits of four varieties of Cucumbers, three fruits of each, made a good show. Matchless, Pride of the Market, Unrivalled, Mascot and Cynosure were the most attractive of the series.

In Class 407, for six varieties of Potatoes, nine tubers of each variety, there were several exhibitors. Balmoral Castle, New Colonist, Crimson Kidney, New Guardian, Empress, The Factor, King of Russets, Snowball, Royalty, Long Keeper and Purple Eyes were worthy of notice.

In another class for three varieties, Gladiator and Harbinger were noteworthy.

In Class 409, for a collection of salads set up in a space not exceeding 9 feet square, the only exhibitor showed a capital lot. Chervil, Ideal Cabbage Lettuce, Peerless Cos Lettuce, Solid White and Superb Pink Celery, Perfection Tomato, Globe Beet, King George Cucumber, Green Curled Endive, Crimson French Breakfast Radish, Nasturtiums, Watercress, Chicory, Onions and Mustard and Cress in variety contributed to make a really good display.

In a smaller class for a collection of salads there were two exhibits, both showing excellent collections of well-matured produce.

In Class 410, for six varieties of Tomatoes, six fruits of each variety, there were three capital collections staged. Eclipse, Winter Beauty, Satisfaction, Perfection, Princess of Wales, Best of All, Invicta, Peach Blossom and Moneymaker were all very good.

In a small class for three dishes, distinct varieties, there were five exhibitors. Satisfaction, Sutton's A1, Princess of Wales, Tuckwood Improved and Winter Beauty were each represented in a well-coloured, highly-finished condition.

In Class 413, for 100 heads of Asparagus, a mammoth bunch of Superb Giant easily outdistanced all the other competitors. Each of the four exhibits, however, was of a high order of merit.

Four lots of French Beans were shown in Class 415. Tender and True, Sutton's Forcing, Fulmer's Forcing and Masterpiece were represented.

In a class for a dish of Broad Beans, the four exhibitors set up Mammoth Longpod, Green Longpod and Giant Seville Longpod in capital form and condition.

Three exhibits of twelve Beets were praiseworthy, Sutton's Globe being chiefly in evidence.

For two varieties of Cauliflowers, six heads of each variety, the three exhibitors staged well. White Queen, Magnum Bonum and Clark's Challenge called for special mention.

There were four exhibits of three varieties of Carrots shown, and these were quite meritorious. Early Gem, Favourite and New Red Intermediate were represented in these exhibits.

Two magnificent exhibits were in Class 398, for twenty-five dishes of vegetables in the open division, not less than twelve kinds or more than two varieties of a kind. His Grace the Duke of Portland showed extremely handsome produce, representing among other subjects Flower of Spring Cabbage, Perfection and Eclipse Tomatoes, King George and Delicacy Cucumbers, Duke of Albany and Early Giant Peas, Giant French Asparagus, White Queen and Magnum Bonum Cauliflowers, Moore's Cream Marrow, Mammoth Longpod Broad Beans, White Leviathan Onion, Globe Beet, Supreme and Ideal Potatoes, Favourite and Champion Scarlet Horn Carrots, Perfection Green Marrow, White Gem and Early Red Milan Turnips, and Golden Ball and Ideal Cabbage Lettuce. This was a superb exhibit, and represented vegetables at their best.

In the other exhibit in the same class, Satisfaction and Eclipse Tomatoes, Sutton's Earliest and Flower of Spring Cabbages, Mushrooms, and Superlative Peas were well done.

For a collection of vegetables set up in a space 50 feet square there were two competitors. Cauliflowers, Tomatoes, Cucumbers, Carrots, Potatoes, Peas, Celery, Lettuces, Marrows, French Beans, Turnips, Asparagus, Seakale, Beet and many other subjects were set up in a dainty and attractive way.

There were six exhibits of a dish of Mushrooms in Class 420, one or two of the exhibits being beautifully even and of good quality.

In Class 421, for a dish of Peas, of the five exhibits Alderman, Hundredfold and Duke of Albany were to be seen in good form and condition.

Eight exhibits in the class for one dish of Potatoes found Ringleader, Balmoral Castle, Gladiator and King Edward VII. the most conspicuous varieties set up.

For nine tubers of a Potato not in commerce there were six excellent lots in competition. Sutton's New White, James Gibson, and The Rival (a seedling from Satisfaction) were the more noteworthy.

Generally speaking, Turnips were very poor.

In Class 426, for three dishes of three varieties of Turnips, there were three competitors. Early Snowball, White Gem, and White and Red Milan were all good.



MESSRS. SUTTON AND SONS' EXHIBIT OF "FLOWERS FROM SEEDS" THAT WAS ARRANGED AROUND THE OBELISK AT THE INTERNATIONAL SHOW.

Radishes, three dishes of distinct varieties, were represented by six lots. Long Frame, Crimson Globe, Forcing White Turnip, Round White Tipped Scarlet Turnip, Forcing Olive and French Breakfast called for notice.

In Class 425, for three varieties of Rhubarb, nine sticks of each, there were two exhibits. Champagne (Hawkes), The Sutton and Hobday's Giant were the varieties staged.

There was only one lot of three varieties of Marrows in pairs, and these were quite good. Moore's Cream, Perfection and another white form were in evidence.

A grand collection of vegetables, open to growers for market, arranged effectively on a space not exceeding 100 square feet, brought out market produce to perfection—boxes of Tomatoes and Cucumbers, baskets of Peas, French Beans, Peas, Potatoes, Lettuces, Carrots, Mushrooms and Marrows in wonderful variety, all set up in a most attractive way. High quality characterised this really fine display, and there is little doubt it will be an object-lesson to many.

Messrs. J. Veitch and Sons, Limited, Chelsea, S.W., staged a grand non-competitive collection of vegetables set up in a most attractive manner. Veitch's Victor Peas growing in pots formed the centre of the group, and, in addition, there were, among other good things, All the Year Round Cauliflowers, Chilian Beet, Improved Nonpareil

Cabbage, Market Garden Cabbage, Ideal, Perfection, Improved Telegraph, Challenger and Sensation Cucumbers, Thomas Laxton Pea, Marvel, Invicta, Trophy, Victoria and Ham Green Favourite Tomatoes, Aubergines, Lettuces, Turnips, Mushrooms in variety and a host of other good things.

In the non-competitive section Messrs. J. Carter and Co., High Holborn, W.C., staged a large and comprehensive collection of vegetables, representing Cucumbers, Tomatoes, Cauliflowers, Carrots, Marrows, Potatoes, Beet, Cabbages, Lettuces and Turnips in considerable variety, and made an attractive display.

Class 394, for an effectively-arranged group of vegetables, for growers for market, brought forth a wonderful group of subjects of a most diverse character. The group was arranged in the form of a square, raised in the centre and gradually sloping to the edges. Most artistically were the different subjects grouped, and in many instances they served to represent vegetables in a high state of culture. This group was set up by Messrs. Vilmorin-Andrieux et Cie, Paris, a firm which have done much for vegetable culture in France.

From the growers of the Districts of the Paris-Lyons Mediterranean System splendid forced Asparagus and grand Globe Artichokes were displayed, as well as a large assortment of French Beans, Potatoes, Onions and other subjects.

A collection of Asparagus set up by M. G. Compont, St. Ouen (Seine), was much admired.

Another large and comprehensive group of vegetables was staged by the Syndicate des Maraîchers de la Région Parisienne, France, in which Cauliflowers, Carrots, Onions, Leeks, Cabbages, Lettuces, Turnips and other subjects were attractively displayed.

In the Belgian Section a fine array of good-quality vegetables were staged on long benches. Here were to be seen grand Cauliflowers, Cucumbers, forced Asparagus, Turnips, Celery, Rhubarb, Radishes, Lettuces and Mushrooms in large quantities.

Especially attractive was the large group of vegetables set up in the Dutch Section. The immense group was arranged in a most artistic way at one end of the tent devoted to the Dutch exhibits, and was certainly a most remarkable production. There were pyramids of Cauliflowers many feet in height, Cucumbers treated in a like manner, masses of Carrots, Lettuces, Asparagus, and beautiful salads, all grouped in a manner that exhibitors on the Continent are alone able to do, and all showing the work accomplished by growers there.



ROCK AND WATER GARDEN DESIGNED AND CONSTRUCTED BY MESSRS. PULHAM AND SONS AT THE CHELSEA SHOW

VIOLAS.

Mr. Charles Turner, Slough, set up baskets of lifted plants, in which many of the popular varieties were represented. Blue Duchess, J. B. Riding, Maggie Mott, White Swan, Mrs. Chichester, Bridal Morn, Admiral of the Blues, Jessie Baker and J. Pilling were the better plants.

In the display covering 100 square feet, Messrs. Gunn and Son, Olton, Warwickshire, set up an attractive group, which lost effect to some extent, however, owing to the somewhat crowded character of the display and the large number of plants of Moseley Perfection set up in the group.

Messrs. Seagrave and Co., Sheffield, made a capital display in the class for twenty Violas distinct. The plants were staged in an admirable way, and represented, among other good things, Countess of Eglinton, Mrs. Henry Wood, Mrs.

NEW AND RARE PLANTS.

NEW ORCHIDS.

FIRST-CLASS CERTIFICATES.

Odontoglossum amabile Duke of Portland.—

A startling variety of an indescribable blending of red and purple, with bars of white on each segment.

Odontoglossum eximium King George.—One of the most outstanding varieties among this prominent genus, the brilliant scarlet maroon of the flowers being conspicuous from a long distance. These two novelties were shown by Messrs. Sander and Sons.

Odontioda Queen Mary.—This is a secondary hybrid between *Odontioda Vuylstekeæ* and *Odontoglossum eximium*. The flowers are light crimson, and the edges are shaded violet with a well-defined and thin white band within the

Odontioda Vuylstekeæ. Shown by F. Menteith Ogilvie, Esq.

Miltonia hyeana Vogelzang.—A handsome variety with exceptionally large ivory white flowers. The lip is of remarkable breadth, and the centre or "eye" of each flower is chrome yellow. Shown by Firmin Lambeau, Bruxelles.

Cattleya Mendelii Queen Mary.—A very taking variety of delicate hues. The lip is of a beautiful soft yellow.

Brasso-Cattleya The King.—The boldest and most noble flower of this section we have ever seen. The diameter across the sepals is about ten inches, and the flowers are most striking and of a glorious colour.

Dendrobium dalhousianum luteum.—Two admirable plants of this novelty were shown, each bearing a profusion of large flowers, pale yellow in colour, with dark chocolate maroon centres.

Cattleya Dirce magnifica.—A first-rate variety and a real improvement on the old form.

Lælio-Cattleya Lustre von Lavingo.—Yet a further improvement upon this beautiful and much-esteemed variety. For brilliance of colour it is hard to excel.

The foregoing were shown by Sir George Holford, and represent the most valuable set of novelties ever shown by one exhibitor at the same time.

Lælia purpurata schroderiana.—A magnificent variety of *L. purpurata* from Baron Schröder's collection.

Miltonia Jules Hye de Crom.—A capital variety, and one much coveted by connoisseurs. The pure white flowers, although undersized, have a broad lip and a very dark and almost black blotch in the centre. Shown by M. Jules Hye de Crom, Belgium.

Awards of Merit were granted to the following: *Odontoglossum ardentissimum* von Carmen (*O. Pescatorei* Charlesworthii × *O. crispum* graireianum), from F. Menteith Ogilvie, Esq.; *Cattleya Mossiæ* Mme. Jules Hye, from M. Lambeau; *Odontioda Bradshawia* var. Vogelzang, from M. Lambeau; *Lælio-Cattleya Lustre* var. Buddha and *Lælio-Cattleya Gladiator*, from Sir George Holford; *Odontoglossum amabile* Princess Mary (*O. hamyeus* × *O. crispum*), *Odontoglossum crispum* James McNabb and *Odontoglossum majesticum* James W. Whitton (*O. eximium* × *O. percultum*), from Messrs. Sander and Sons; *Lælio-Cattleya Ulysses* (*Lælio-Cattleya Fascinator* × *Cattleya Mossiæ ricickiana*) and *Lælio-Cattleya Ulysses alba*, from Messrs. Charlesworth and Co.; and *Zygopetalum Armstrongæ*, from Messrs. Armstrong and Brown.

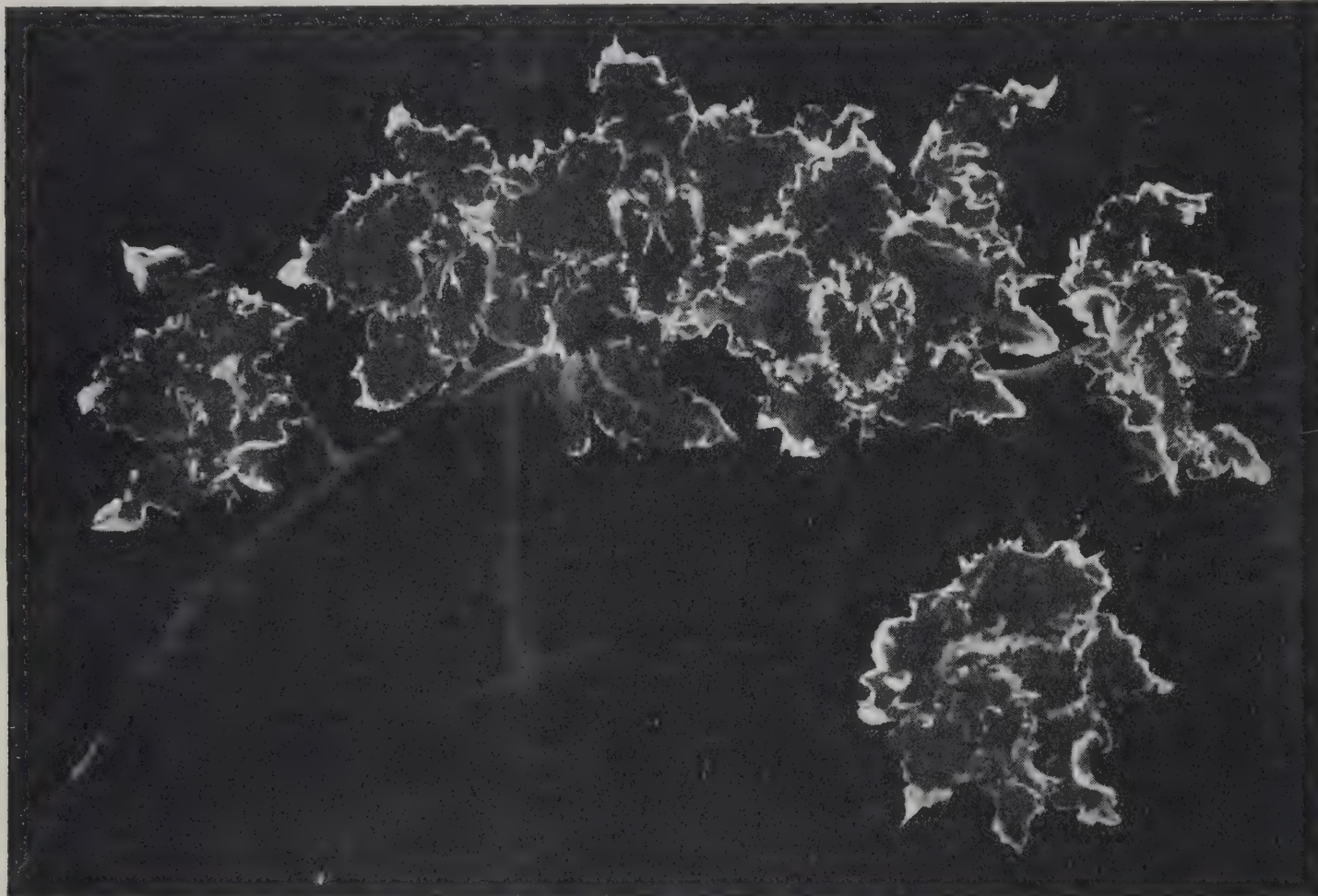
NEW PLANTS.

FIRST-CLASS CERTIFICATE.

Leptospermum scoparium Nichollii.—A delightful evergreen shrub from New Zealand, every twig and branch being embowered with rosy red flowers. The plant is obviously of free growth.

AWARDS OF MERIT.

Leptospermum scoparium Boscawenii.—This is a much larger-flowered variety than the above,



ODONTOGLOSSUM HER MAJESTY, A BEAUTIFUL NEW VARIETY SHOWN BY MESSRS. CHARLESWORTH AND CO. AT THE INTERNATIONAL EXHIBITION.

G. Charles, Gladys Finley, Agnes Kay, Mrs. Morrison, Dunbryan, Moseley Perfection and Mary Wynn. The group was beautifully set off with Selaginella and other plants.

In the non-competitive section Violas and Pansies were shown as growing plants. The collection looked very free and nice, and served to illustrate the beauty of these flowers. Virgin White, Duchess of York and Snowflake were good whites; Royal Sovereign and Klondyke, yellows. Edged sorts were represented by Waverley Blue Cloud, White Duchess and Mrs. Chichester; blue varieties by Maggie Mott and Archie Grant; and a fine lot of fancy Pansies helped to make a really charming exhibit.

Viola Moseley Perfection and a carpeting of Viola cornuta purpurea made a beautiful show in the big tent. The former is one of the largest yellow Violas, and the latter a wonderfully profuse bedding sort.

margin. The markings are clearly shown in the illustration in last week's issue, page 263. The flowers are fine and large, and the lip is tipped with a band of white.

Odontoglossum Her Majesty.—A large flower of good form, and so heavily blotched with maroon that very little of the light groundwork is to be seen. These two gems were shown by Messrs. Charlesworth and Co.

Odontoglossum eximium Excelsior (*ardentissimum crispum*).—An exquisite variety, chocolate red in colour and fringed with white. Shown by M. Charles Vuylsteke, the celebrated Orchid hybridist of Loochristi, Belgium.

Odontioda Mrs. F. M. Ogilvie.—A charming variety, chestnut red in colour, surrounded by a darker zone and edged white with a suffusion of pink. The lip is white, with golden markings. Parentage: *Odontoglossum amabile* Royal George ×

and is of hybrid origin. The exhibited examples were about five feet high, the pink blush flowers rendered conspicuous by a great red eye or centre. The above two fine New Zealand subjects were exhibited by the Rev. A. T. Boscawen, Long Rock, Cornwall.

Hydrangea Sargentiana.—One of the most distinct species we have seen. The bracts are white, and emerge and extend on rather long drooping petioles. The leaves are large, obovate acuminate, the stems densely pilose. The plant appears to be of vigorous growth. Shown by the Hon. Vicary Gibbs, Elstree, and Messrs. James Veitch and Sons, Limited, Chelsea.

Papaver orientale Edna Perry.—This is a salmon-coloured variety with deeply-lacerated petals. Very showy.

Papaver orientale Perry's White.—This has handsome, large, finely-cupped flowers, whose rounded petals each have a huge black spot at their base.

Lilium davuricum luteum.—In all probability this is the true *L. davuricum* from Siberia, characterised by its densely woolly stems. The erect flowers are pale orange yellow, heavily spotted with crimson. These three plants were exhibited by Mr. Amos Perry, Enfield.

Polypodium Vidgenii.—A distinct novelty among Ferns, handsome and pleasing withal.

Lastrea patens Mayii.—This is said to be of hybrid origin, and is certainly a good addition to greenhouse Ferns. These were exhibited by Messrs. H. B. May and Sons, Limited, Edmonton.

Deutzia Veitchii.—A most delightful plant, with large flowers of rosy pink colouring appearing freely from Viburnum-like leafage. A delightful acquisition that must take first rank among hardy flowering shrubs. Shown by Messrs. James Veitch and Sons, Limited, Chelsea.

Pyrethrum Queen Mary.—This plant has been before the floral committee on more than one occasion, but never before has it been displayed in such profusion or richness of colouring. It is a double pink-flowered variety. Exhibited by Mr. G. W. Miller, Wisbech.

Lilium myriophyllum.—This handsome trumpet Lily has probably been known to botanists and specialists in this country for half-a-dozen or so years. It is virtually a *Brownii* form in point of flower, whiter generally, and with the narrow leafage almost of *tenuifolium*; hence it is a distinct plant, and withal a good doer. It is a native of China, and promises, by reason of its easy culture and free-flowering, to become popular in gardens. A first-class plant in every way. From Messrs. R. W. Wallace and Co., Colchester.

Oxalis enneaphylla rosea.—This is just a rose-coloured form of a beautiful species from the Falkland Islands that puzzles not a few cultivators in this country at the present time. We should

like to have seen the plant in a more promising or congenial mood. From Mr. Clarence Elliott, Stevenage.

Eremurus Tubergenii.—A yellow-flowered sort, presumably *E. Bungei* and *E. robustus* crossed, though we have no information to this end. The great spires of primrose yellow flowers are very beautiful. Exhibited by Messrs. R. W. Wallace and Co., Colchester.

Begonia Princess Louise.—This is a double-flowered variety, and in all probability one of the most gloriously beautiful of the salmon-coloured shades yet raised. The handsome flowers are

woolly stems and leaves. From Bees, Limited Liverpool.

Iris squalens Nibelungen.—The standards are clouded, the falls crimson-red.

Iris variegata Ossian.—Standards yellow, falls reddish. These were from Messrs. Barr and Sons, Covent Garden, W.C.

Sweet Pea Mrs. Cuthbertson.—A bicolor with pink standards and white wings.

Sweet Pea Brunette.—This is a self maroon coloured variety.

Sweet Pea Melba.—The colour is salmon, and of a tone valuable and pleasing in decorative work. These were exhibited by Messrs. Dobbie and Co., Edinburgh.



A THREE YEARS' OLD PLANT OF SAXIFRAGA CÆSPITOSA.
(See page 284.)

6 inches across, and are as remarkable for great depth as for size. Exhibited by Messrs. Blackmore and Langdon, Bath.

Calceolaria Veitchii.—A most charming and graceful plant, the result of crossing *C. alba* with an albino form of *C. Golden Glory*. The exhibited examples were 5 feet high, and characterised by narrow, acutely-pointed serrated leaves. The flowers are of ivory or creamy white, and produced in wonderful profusion. A great acquisition. Exhibited by Messrs. R. Veitch and Co., Exeter. Illustrated in our issue for May 25.

Celmisia spectabilis argentea.—A New Zealand species with white flower-heads and rather white

NEW ROSES.

THERE were some really good novelties on view at this wonderful exhibition, although perhaps nothing of a startling character.

Rosarians are always on the alert for something great to be produced, and all who engage in the work of hybridising are fully aware of the great possibilities to be achieved sooner or later.

Although not exhibited in any force, owing to the trying weather recently experienced, Messrs. Alex. Dickson and Sons had sufficient of their grand novelty.

George Dickson, to show visitors what a superb advance it is. When such successful raisers as Messrs. Dickson tell us it is the best thing they have yet produced, no further commendation is required. I have seen the Rose before, and shall never forget the wonderful boxful put up at Ulverston, which secured the unanimous vote of the judges for the gold medal. Perhaps the most beautiful novelty was one from M. Pernet-Ducher.

Mme. Edouard Herriot. This is a real gem in colour, and one that it is difficult to describe. It is a sort of crimson terracotta, with all the fiery colour of Mrs. A. R. Waddell, and also some of *Beauté de Lyon*, combined. Although belonging to the Pernetiana race, it is as free as a Hybrid Tea. This Rose was awarded the special cup as the best novelty.

Freda I believe to be the next best novelty. It is one of which Messrs. Paul and Son of Cheshunt may be justly proud. The depth of bloom and fulness are truly superb, and the colouring is a lovely tint of rose pink. Exhibitors have not had a more useful Rose than this for a long time, and, judging from its strong growth, it should be equally grand as a garden variety.

Mrs. E. Alford may be best described as a fuller and more superb Mme. Abel Chatenay with the grand contour of a very superior La France. The long, stiff stems proclaim it a splendid forcer.

Mrs. George Beckwith is a wondrous colour, resembling *Rayon d'Or*, but with a superior form

and apparently strong, erect growth. This and one named Constance came from M. Pernet-Ducher, and both favour Rayon d'Or in the glorious deep yellow colouring. The notorious

Sunburst was not shown in quite its true character. Some flowers were of the deep golden colour of Lady Hillingdon, but others of the first growth were quite pale. It is, nevertheless, a superb bloom, the petals of great texture and the form grand. It is a sort of glorified Mrs. Aaron Ward, still one of the loveliest of Roses for the greenhouse as well as for the garden, but the growth of Sunburst is longer, more of the Antoine Rivoire type, carrying the blooms quite erect. It may not supplant Lady Hillingdon in midwinter, but will be a far better Rose from the second growth.

Alexander Hill Gray was in exquisite form from Newtownards, and I predict for it a great future. The clearness of colouring and the large petals are truly beautiful. Probably the yellow colouring will be even deeper outdoors.

Melody is another good thing from Ireland. I am not surprised this Rose is going strong in America, for there is a superb finish and fulness about it that must commend it to all.

Sallie secured for Messrs. B. R. Cant and Sons a first prize. It is a fine Rose of the Joseph Hill type, but richer in colour. It will be a grand variety for the exhibitor, also for the garden.

Mme. Charles Lutand is of splendid growth, also form, and I believe from the second growth will be a formidable rival to Marquise de Sinety. As seen here the blooms were paler.

Ophelia is a pretty Hybrid Tea of tints and growth, reminding one of Clara Watson, only not so full. P.

FLOWER GARDEN.

WORK AMONG THE AURICULAS.

Potting.—It has already been pointed out in this column that the month of May is usually the best for potting plants which demand such attention; but if it could not possibly be accomplished by the end of last month, let it be finished with the utmost despatch now that June is in. Bear in mind that any material delay now will force the postponement of the operation until the late summer, and this cannot be regarded as satisfactory. Use a plain compost in which sound, fibrous loam plays by far the most important part, and see that the tap and any other roots which are not in perfect health are cut away before the plant goes into the fresh soil. With the object of reducing the necessity for too frequent watering afterwards, keep the frame a little closer to reduce the evaporation. Any plant, no matter what its size or age may be, or whether it demands repotting or not, which shows the

slightest indication of being in ill-health must have instant attention, as it is commonly found that an American blight-like animal is attacking the roots, and unless it is promptly destroyed the plant will soon be ruined.

Watering.—It has been suggested in the preceding paragraph that plants which have just been potted must have no more water than is absolutely imperative; but established specimens require regular supplies if they are to continue in satisfactory condition. It must not be inferred from this that it is suggested to give water every day, because nothing of the kind is meant. The thing is to study the plants so closely and intelligently that the necessity for water is



ROSE MME. EDOUARD HERRIOT, THE BEST SEEDLING ROSE SHOWN AT THE INTERNATIONAL EXHIBITION. RAISED AND EXHIBITED BY M. PERNET-DUCHER.

anticipated by a few hours, as this will mean that the soil in the pots can never become dry on the one hand or sodden on the other. An equable condition of soil moisture is peculiarly conducive to success.

Thrips.—It is something to be regretted that yellow and black thrips show a marked partiality for Auriculas; but they only appear during hot, dry weather, so that it is not difficult for the cultivator to be prepared to give them a more cordial reception than they are able properly to appreciate. Immediately an attack is observed—and it must be seen early to prevent real injury—take reliable steps to suppress it. Better still, however, is it to endeavour to create conditions that are

unfavourable to the enemy, as prevention is always preferable to cure. The frame should be given a northern aspect, not only because this is exceedingly beneficial to the plants in the summer months, but also because the thrips do not like the cool atmosphere which is favoured by this simple expedient. Red spider, too, will make its presence felt in arid frames, so that much good follows the cool aspect and the correct watering. If it should become necessary to use an exterminator against enemies of this nature, I know of nothing superior to XL All for the purpose.

An Insidious Enemy.—Among young plants, or even among the young leaves of old plants, there is no enemy that causes so much trouble and worry as a small, dark-coloured maggot, which bores into the heart of the plant and will cause its death in a very short time. The keenest watch alone will suffice to detect its presence, and the outward and visible sign takes the form of a drawing together of the small leaves with an extremely fine web. Immediately this is seen, examine the plant minutely, because it will almost always be found that between the folds of the leaf so cleverly drawn together a dark maggot will be seen. Growers will not demand a suggestion from me or any other writer as to the readiest means of meting out instant death to the intruder.

Plants in Seed.—The amateur who indulges in cross-fertilisation in the hope of producing varieties superior in merit to any now in cultivation has a difficult task in front of him; but if he proceeds on intelligent lines he is sure to produce something that will bring him infinite pleasure. At the present time, in normal conditions, the seeds will be developing steadily, and in the ordinary course of events they will ripen between the beginning and the end of July. It is not desirable that these plants should be disturbed for potting, and, as a rule, the seeds will be the better if rather less water is given than to the bulk of the collection. F. R.

SAXIFRAGA CÆSPITOSA. This, one of the Mossy section of this beautiful and interesting family, is one of the freest of my

alpine plants here at Woodford, and makes an excellent subject for carpeting a semi-moist bank halfway down some steeply-sloping part of the alpine garden, where it will not receive the fiercest of the sun's rays. The plant illustrated on page 283 consisted of a 2½-inch potful rather less than three years ago, and has now, without any further attention, made a patch 2 feet 6 inches in diameter. The flowers are very pale cream, and are produced in such quantities as to entirely hide the foliage. The soil I give it is just ordinary garden loam (by no means of the best) well mixed with grit and a little leaf-mould. The position halfway down the bank of rockwork and facing west ensures its roots being moist. R. A. MALBY.

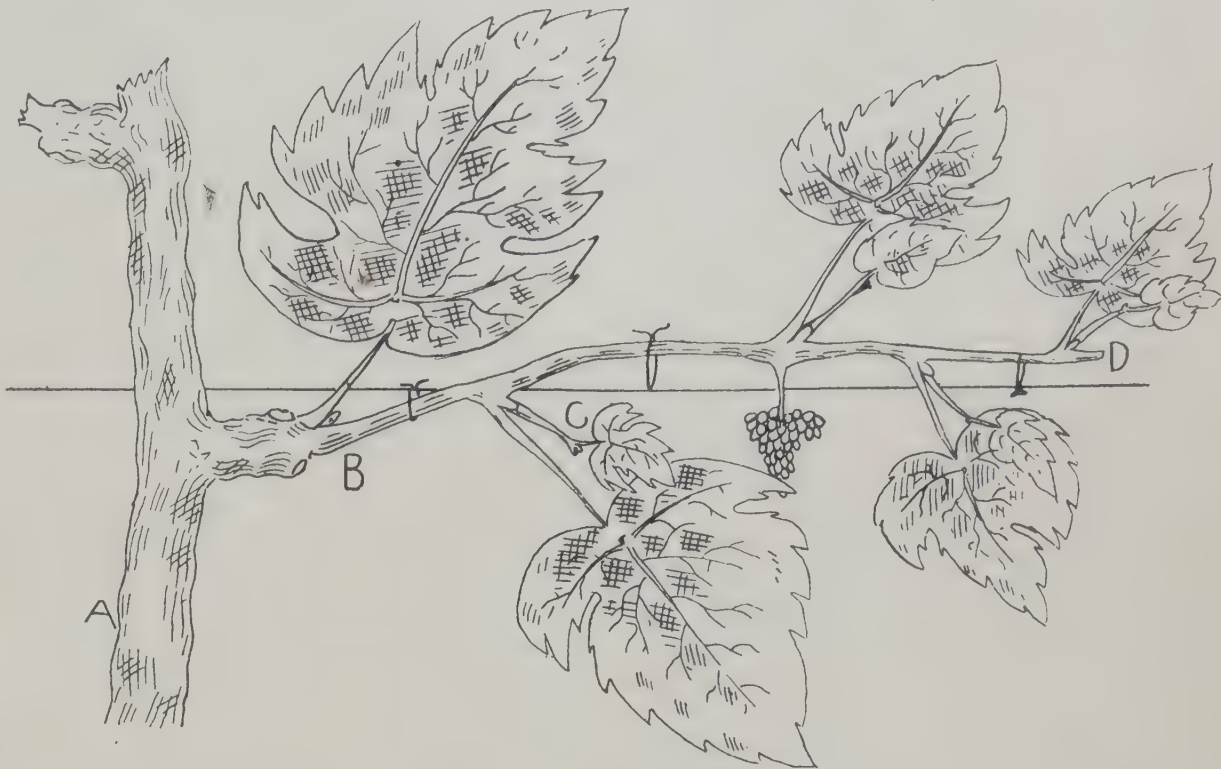
GARDENING FOR BEGINNERS.

TYING DOWN AND STOPPING VINES AND THINNING GRAPES.

ALTHOUGH Vine shoots are tough when matured and will withstand much bending and still not break, they are very brittle when in a young state, and, in fact, until the berries begin to swell freely. This being recognised, the cultivator must exercise considerable care when tying down the young shoots to the wires under the glass. The work must be done gradually; if they are in the first instance brought down level with the wires, they will snap off. First of all, the tips should be pinched off and the ends slightly pulled away from the glass and made secure to the wires with soft strands of matting. In a few days' time the shoots may be depressed 2 inches more, and so on until they are brought down to the wires as shown in the accompanying sketch.

Now, it is very important that the whole of the roof space be covered with foliage, but only with the main leaves and the first leaf (c) on each lateral shoot. From the main rod, A, the side shoots or branches will grow as shown, alternately, one on one side and another on the other side; then the branches of the Vines will dovetail, as it were, into each other, and so completely furnish the roof with healthy foliage without causing any overcrowding.

The Illustrations Explained.—Fig. 1: A, Vine rod; B, a side shoot or branch growing from a spur; C, a lateral growth, which must be stopped at the first leaf, the one leaf only being retained throughout the summer; the sublateral shoots which grow from its base must be regularly removed while they are quite small. Not more than one bunch of Grapes must be allowed to mature on a



1.—VINE SHOOTS MUST BE TIED DOWN GRADUALLY, OTHERWISE THEY WILL SNAP OFF.

branch, and the latter should be stopped at two joints beyond the bunch, as shown at D. The individual Vine must only be allowed to mature 1 lb. of Grapes per foot run of main rod. One large leaf, kept healthy and with ample room to grow in, will be of more value than three leaves occupying the same space.

Thinning-Out the Berries.—The amateur should never be in too much hurry to cut out the berries

from the bunches, as they should be left to grow large enough to show which are well "stoned" and which are not. On the other hand, undue delay in the matter of thinning would not prove very satisfactory, as the berries left in would get marked and not swell to as large a size as they should. Vines growing in cool structures and greenhouses start growth almost naturally, and are not ready for thinning as soon as those assisted by fire-heat, but the Grapes finish well in ordinary seasons. A bunch unthinned, as shown at A (Fig. 2), contains, if the "set" has been a good one, at least three times more berries than should be left to mature. In the first place, the cultivator must cut out the very small, stoneless berries, using a pair of bright, dry and clean Grape scissors. The berries left must not be touched with either hands or tools. A smooth, forked stick may be used to steady the bunch while the surplus berries are being cut out; B shows how the shoulders must be neatly tied up to the wires, and C depicts the bunch after being thinned, the berries swelling freely. The cultivator must commence at the bottom of the bunch and remove the surplus berries upwards, also from the extreme ends of the shoulders, and finish at the top of the bunch. More berries may be left, in proportion, at the top than at the bottom, because there is more room there for them to swell in. Usually there are three berries at the extreme ends of side shoulders, as shown at D; these must not be cut out. Short-stemmed berries require more severe thinning than long-stemmed ones.

G. G.



2.—BEFORE AND AFTER THINNING. IN THE UNTHINNED BUNCH THERE ARE AT LEAST THREE TIMES MORE BERRIES THAN SHOULD BE LEFT TO MATURE.

TOMATOES AND SIDE SHOOTS.

At this time of the year side shoots appear from the axils of the leaves and main stem with remarkable rapidity. All side growths should be pinched out in the early stages; this will give greater nourishment to the trusses of fruits forming on the main stem.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Primula malacoides.—This new Primula, of comparatively recent introduction, makes a charming plant for the cool greenhouse in the early spring months. To obtain nice plants, sow the seeds now.

Chrysanthemums.—The work of the final potting will soon be engaging attention. To ensure success it is desirable that a suitable compost be prepared for them, and if this is mixed and prepared a week or so beforehand, it is to be preferred. Avoid having this too fine; the staple part should consist of good, fibrous loam, to which add some leaf-mould and spent Mushroom-bed manure, according to the nature of the loam, together with a sprinkling of soot, wood-ashes, a little patent plant food, with a liberal addition of coarse road or river sand. Thoroughly harden the plants before potting, pot firmly, and if space is left for further top-dressings, this will be an advantage.

The Flower Garden.

Verbenas.—When well grown, few of the occupants of our borders during the summer months create a greater display. On well-prepared ground these grow freely, when attention is given them as to pegging down the growths. Allow the plants at least a foot apart, and sprinkle with a rosed can in the evening.

Sweet Peas.—The earliest flowers from the autumn-sown plants will soon be ready. With these, and those sown later, any little attention required, such as tying up the haulm, should be done. A little nitrate of soda sprinkled beside the rows in showery weather or well watered in may be given, but avoid an excess.

Pentstemons.—The seedlings raised this year will now be fit for planting out, and will give a grand display in the late summer months. Keep the Dutch hoe going between the plants. Seedlings raised from a good strain are preferable to cuttings, as when the latter method of raising is continued year after year the vigour of the plants deteriorates.

The Rose Garden.

Climbing Roses.—These are growing apace and will need tying in to the poles or pergolas. Let the work appear when finished as natural as possible, so that the flowers when they expand are seen to their best advantage. If the plants are attacked by aphids, syringe thoroughly in the evening.

Mildew.—This, if allowed to go on unchecked, will soon disfigure and exhaust the plants' energies. Syringe with a solution of sulphide of potassium, half an ounce to the gallon, or dust the foliage with black sulphur when the dew is on the plants, or the foliage may be damped with a syringe producing a fine spray.

Roses on Walls.—During hot weather especially the growth of these will be much accelerated and the quality of the flowers improved if the growths are syringed either in the early morning or evening. Apply a good mulch to the surface of the soil and water copiously, as Roses in such positions frequently derive but little benefit from occasional rains.

Hardy Fruit Garden.

Currants.—The bushes of Red and White Currants will benefit for more reasons than one if the shoots are tipped back within a week or so. In the first place, aphides are removed and more air and light can reach the fruits, while the appearance of the bushes is improved, and admits of a covering of nets being placed on with greater ease as soon as the berries commence to colour.

Gooseberries.—Where heavy crops of the best dessert varieties are hanging on the bushes and good fruits are wanted later on, the fruits can be thinned now for preserving and for use in the kitchen, which will allow the remaining berries to swell to a larger size.

Fruits Under Glass.

Late Houses of Peaches and Nectarines.—Make sure that the borders do not suffer for the want of water. With frequent syringings it often happens that the borders appear well supplied with moisture, as they are on the surface,

but the lower parts of the border are quite dry. Apply stimulants, except while the fruits are stoning, when the trees should not be excited in any way. Give plenty of air, syringe twice daily, and damp all surfaces of the house.

Fire-heat.—During the next month or two little assistance should be required by artificial heat, especially with Muscat and midseason Grapes. For Figs and Melons a slight circulation is wanted in the pipes at night, and the extra expense is well repaid. When the weather promises fine, the heat should be shut off or the fire allowed to go out quite early in the day.

The Kitchen Garden.

Celery.—Continue to plant out for late supplies. Choose showery weather for this, if possible, and as quickly as possible plant after lifting with a good ball of soil attached. Give a good watering in and keep the plants damped over. Once a week give the plants a dusting of soot, which will do much to ward off the fly.

Leeks.—For late kitchen use make a further planting. Select a shady part of the garden, bore holes with a dibber and drop the young plants to the bottom, and close in with some of the finest soil at the roots.

Potatoes.—Earth up the crops of these as becomes necessary, and where the growths are too numerous, thin out the weakest, or a heavy crop of haulm will be grown at the expense of the tubers.

Onions.—The transplanted ones that were raised in heat at the beginning of the year should have the soil between the rows constantly stirred with the Dutch hoe, and be damped over as often as possible in the absence of rain. Give a dusting of soot occasionally, and as soon as these are growing freely a little artificial manure may be given during showery weather. The main crop requires similar treatment. Carefully hand-weed when necessary in the rows, and pull evenly from the bed as required for salads, etc., but not too severely.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Grape-Thinning.—The late Hamburgs and Alicantes are now at the thinning stage, the former needing a much less number of berries to be removed than the latter. Ugly shoulders should be cut off.

Feeding Vines.—Long-established Vines must be well fed to be satisfactory. At the above stage it is therefore important to apply to the borders a dressing of sifted pigeon-manure, being careful to keep the top ventilators slightly open at night to allow of the escape of noxious gases. Soot is also beneficial, and when applying water to the borders let it be strengthened with a soluble manure.

Peaches.—Before the fruits mature on early trees, soak the borders with water, and if there is the least fear of red spider attacking the foliage, syringe with a solution of Quassia Extract. This may be supplemented by fumigating the structure with Tobacco cloth, but always bear in mind that the Peach is easily damaged by insecticides, and Tobacco fumes especially. Pinch out all the lateral growths which push from the axils of shoots of the current year. The ventilators of Peach-houses need never be closed during the summer months unless for hastening the ripening of a particular crop.

The Flower Garden.

Plant-Supporting.—See that the slower-growing perennials are not left without supports. A piece of string lightly fixed round the stems is often sufficient.

Tuberous Begonias.—These may now be planted. Ours for planting out are forwarded in boxes thinly disposed, and transplanted with large balls of roots and soil. They should be rather deeply planted, so that the tubers are covered with at least 2 inches of soil and the roots well into the ground. Soak the soil of the beds as planting proceeds, and if a carpet of Lobelia or other low-growing plant is contemplated,

delay planting till the next day, when the ground will be in a fit condition to work.

Dahlias.—Plant these at once to ensure a not too late bloom. These are voracious feeders, and provision to meet their requirements should be made before planting. Some growers prepare the site of each plant by the addition of compost. If the soil is at all inclined to dryness, soak it with soft water on the conclusion of operations, which should include a light stick to which to tie the shoot, to be afterwards replaced by a stout stake. I am using for effect a few of the large-flowered kinds, of which Souvenir de l'Douzain is the chief; also Geisha, Liberty, Grand Duc Alexis, Beauty of Arundel and others.

Reserve Plants.—A small percentage of those plants which experience shows sometimes fail in part to grow should not be kept in the receptacles in which they were prepared for planting-out, but either in others where fresh soil and more space can be given them or in a reserve quarter of the kitchen garden. In addition there should be a quantity of late-flowering plants provided, such as African Marigolds, China Asters in variety and Chrysanthemums, of which I annually use a very large number for transplanting while in flower. Besides these it is essential to pot up Lobelias for stock, and Iresines and other tender things should also be preserved for the same purpose.

The Plant-Houses.

Hippeastrums.—As soon as seeds are matured sow at once, by which practice a year at least is gained in the flowering of the seedlings.

Tree Carnations.—Be careful after this in stopping. Cuttings of scarce varieties rooted last month need not be stopped at all, but left to grow with a central stem and the natural breaks, which are sure to become strong before autumn. Five-inch pots are the correct size for these.

Chrysanthemums.—The final potting of these should be accomplished forthwith. Souvenir de la Petite Amie, niveum and Miss A. Pockett are invaluable grown in 6-inch pots for Christmas, and many of the singles also do well in small pots; but for cut flowers they produce many more when larger pots are used. Miss Margaret and Annie Lowe are splendid for cutting, and of these several may be potted into one receptacle, as they do not break freely. It saves a large amount of labour in watering to plunge the pots, also after-annoyance if the plants are staked at once and made secure from winds by fixing them to wires or other supporting material.

Insects.—These multiply if left unmolested at an amazing rate during the summer months. The mite on Begonia Gloire de Lorraine can only be kept down by nicotine vaporising; thrips on Dracenas by the same means or dipping in water at 150°. Mealy bug on many kinds of plants is easily destroyed by dipping the plants in hot water, by spraying frequently with an approved insecticide, and by dusting with Tobacco powder. If it gains a footing on Grape Vines, repeated syringing with water that has been boiled and allowed to cool to 150° to 180° kills the insects and scarcely damages the clusters of Grapes, due care being observed. Quassia is excellent for aphids.

The Vegetable Garden.

Onions.—A dressing of soot and any other suitable manure should be applied now that the plants are growing vigorously, and the surface be thereafter stirred.

Parsley.—The main Parsley-bed should be planted from seedlings raised in the open. Set about twelve inches to fifteen inches apart in nice friable, but not too highly-enriched soil, which causes a coarse growth. Dress the ground with soot as a preventive of root maggot.

Seeds to Sow.—A little Endive may be sown for use in autumn, and the very dark-hued Beets, such as Cattell's, should not be sown earlier, else they will grow too coarse. Also sow a few seeds of London Colewort, waiting a fortnight to make the main sowing. This is a useful vegetable not much grown in the North. At the same time sow seeds of a good second-early Cauliflower. Spinach, Mustard and Cress, Radishes and Lettuces must be sown at short intervals not exceeding ten days, and Lettuces should be regularly transplanted, a few at a time, in order to secure a constant supply.

R. P. BROTHERSTON.

Tynninghame, Prestonkirk, N.B.

HORTICULTURAL SUNDRIES AT THE INTERNATIONAL EXHIBITION.

The Leyton Timber Company, Leyton, Essex, were showing rustic summer-houses, garden seats, tables, garden furniture and fencing generally.

The Twelve Hours Stove Syndicate, Westminster, had a most useful exhibit of their well-known twelve-hour stoves, suitable for heating amateurs' greenhouses, ranging in various sizes, which could be adapted to meet all requirements.

Messrs. James Crispin and Sons, Bristol, showed greenhouses and conservatories suitable for either large or small gardens, which were well built and adapted for all classes of plants. In addition, the special boilers of the independent saddle type, namely, "Mona," "Robin Hood" and "Senior," were shown in various sizes.

Messrs. James Weeks and Co., Chelsea, were exhibiting greenhouses and heating apparatus generally. Among the latter was to be noticed one of the "Strebel" boilers, with an automatic draught attachment for regulating the fire.

Messrs. Skinner, Board and Co., horticultural builders, Bristol, showed a specimen greenhouse built on their well-known wire tension principle, having a curved iron framed roof. The greenhouses built on this system are easily portable and practically imperishable, as there is no putty to require constant attention and repair, and the maximum amount of light is thus obtained.

The Fernden Fencing Company, Tothill Street, Westminster, S.W., had a pretty and artistic arrangement of fencing and trellis-work in various forms.

"Dryad" furniture was shown from Mr. H. H. Peach, Thornton Lane, Leicester. His celebrated cane manufactures are most suitable for garden and summer-house work.

Messrs. George F. Braggins and Co., Banbury, Oxon, were showing gates suitable for garden and estate work of all descriptions, and a very useful form of hand-cart.

Mr. John Pinches of 3, Crown Buildings, Camberwell, showed the well-known "Acme" labels and wire goods, one of the specialities being a Rose box, the lid of which lifts off quite easily. Two wire supports may be placed through holes at the back of the box in order to raise it on the exhibition table sufficiently high to show off the blooms to the best advantage without the use of blocks, as used in the ordinary way. This is claimed to be the lightest box on the market, which is a consideration to exhibitors. Rose trainers of all descriptions were shown. A special machine for packing Roses and other tall-growing plants, which folds up quite close, and firmly holds a covering around the plants with a ratchet adjustment, to any size, until the packet is completely strung, was also shown. It is composed of a series of semi-circular rings, which either open wide or close up at will.

Messrs. Pulham and Sons, Newman Street, Oxford Street, London, had a large and varied selection of stone garden ornaments, including vases, fountains, sun-dials and other special forms.

The Thames Bank (Blackfriars) Iron Company, Limited, Upper Crown Street, E.C., were showing several of their special lines in heating apparatus, including upright and horizontal tubular boilers, and the "Crown" and "Economic" as special lines; also the "Heel" boiler for amateur work.

Mr. H. C. Slingsby, Old Street, E.C., was showing the Slingsby steel-backed ladder, a light form which is very strong and durable.

Messrs. Rowell and Co., Old Queen Street, Westminster, were showing iron fencing, tree guards and trainers of their well-known make.

Messrs. Höntsch and Co., Niedersedlitz, Dresden, had a smart exhibit, including a section of greenhouse showing the ventilating gear and construction complete, together with several small models of the various types of greenhouses and conservatories which they are prepared to construct.

Messrs. Walters and Co., Amberley Grove, Croydon, who are famous for their artistic trellis-work, fencing and garden furniture, had an effective display in up-to-date designs.

Messrs. T. Crowther and Son, North End Road, Fulham, had a most interesting exhibit of unique garden ornaments, including old stone vases and wells, lead vases and pedestals, garden seats and temples.

Messrs. Lloyd Lawrence and Co., 29, Worship Street, E.C., had examples of their famous Pennsylvania lawn-mower in all sizes, also seed drills and the well-known "Planet Jr." hoes.

Messrs. S. and E. Collier, Limited, Reading, were showing pottery in many varied and artistic forms.

The German Potash Syndicate, 117, Victoria Street, S.W., had an interesting exhibit showing plants in various stages of growth which had been treated with additional potash.

Messrs. C. P. Kinnell and Co., 65A, Southwark Street, S.E., had a most representative selection of their well-known goods on view, including the "Rochford," "Bisson," "Covent Garden" and "Anglian" boilers. The last-named was represented by a monster capable of heating from 11,000 feet to 12,000 feet of 4-inch piping. In the medium size of this boiler a great advance has recently been made. One of the sections had been arranged with the flow coming outwards on both sides, which may be had entirely in this form if required. This is a most important factor for those who depend on shallow stokeholds. This boiler, working up to 2,700 feet of 4-inch piping, can be set in a depth of 4 feet 9 inches, which is a saving of at least 9 inches over those having top flows.

The Hon. Mrs. R. C. Grosvenor, designer of gardens, Morrisburne House, Woking, had an interesting space with a thatched summer-house and a selection of garden ornaments, surrounded by an artistic fencing arrangement.

Messrs. Vipan and Headley, Limited, Leicester, were showing garden furniture of all descriptions, and also the "Wyvern" lawn-mower, which is entirely hand-made, and a solid oak Rose temple.

Messrs. William Duncan Tucker and Sons, Limited, 27, Cannon Street, E.C., the well-known horticultural builders, had some excellent specimen plant houses and conservatories on view, together with other specialities for which this firm is noted.

Messrs. William Poupart, Limited, Fernleigh Orchards, Twickenham, had a large and varied exhibit of bottled fruits, which were clearly and carefully preserved in the best possible manner.

Messrs. Macmillan and Co., horticultural publishers, London, were showing a choice selection of standard works in connection with gardening.

Messrs. G. Jackman and Sons, Woking, Surrey, had a nice selection of garden plans and designs. This firm also showed a model of their tree-planting machine, which enables large specimen trees to be removed and transplanted at any

distance. The exhibit was situated in the open near the south-east end of the large tent.

Miss Helen Colt of Hampstead had an exhibit of models showing the possibilities of what may be done in town and suburban gardens.

Miss Wheeler, Hampshire, also showed photographs and views of students' work in school gardens.

Messrs. Charles Letts, diarists, London, had specimens of their well-known diaries in all sizes on view.

Messrs. J. Pither, Limited, Uxbridge, Middlesex, were showing examples of Mushroom spawn.

The Selborne nesting-boxes were shown by Mr. Wilfred Mark Webb of Odstock, Hanwell.

The Pwllbach Colliery Company, Limited, Swansea, were showing specimens of their well-known horticultural coal in various grades.

Dansyz Virus, 52, Leadenhall Street, E.C., were showing their well-known rat poison, which, although fatal to the rodents in question, is perfectly harmless to human beings.

Messrs. R. A. Lister and Co., Limited, Dursley, displayed a most effective exhibit of well-made tubs, suitable for home and garden use, in a large and varied selection of artistic designs.

Messrs. Pilkington Brothers, Limited, St. Helens, Lancashire, had samples of their well-known cloches on view.

Robert Sydenham, Limited, Tenby Street, Birmingham, made a large display of rural table decorations in many new and choice designs, the whole being arranged in an artistic manner, setting forth the great advantage of this special form of table decoration.

Mr. James George of Putney showed his well-known specialities in horticultural sundries.

Messrs. Lawes Chemical Company, Limited, 59, Mark Lane, E.C., showed their well-known manures.

The Bon Arbour Chemical Company, Paterson, New Jersey, U.S.A., showed samples of their special goods.

Mr. Julius Hansen, Pinneberg, Hobstein, Germany, showed Lily of the Valley crowns, for which this house is noted.

Messrs. James Green and Nephew, Queen Victoria Street, E.C., had some excellent examples of their well-known glass and glazed ware, suitable for all horticultural purposes.

Messrs. Blake and Mackenzie, Limited, Islington, Liverpool, showed specimens of their paper pots, which are now in such great demand for raising seedling plants, &c.

The Elsenham Jam Company, Elsenham, Essex, showed specimens of their well-known jams and preserves.

The Boundary Chemical Company, Cranmer Street, Liverpool, were well to the fore with their various compounds for all garden purposes, a notable feature being the "Simplicitas" Sweet Pea trainer.

Messrs. William Cooper and Nephews, Berkhamsted, had several specialities, notably the celebrated V Fluids, both as insecticides and fungicides.

Messrs. H. Pattisson and Co., Streatham, S.W., showed specimens of their lawn boots for horses in various sizes.

Messrs. Corry and Co., Shad Thames, E.C., showed to advantage their well-known goods, especially the famous "Niquas" and "Summer Cloud" shading.

Messrs. E. A. White, Limited, Beltrig, Paddock Wood, Kent, had the latest examples and

improvements in their well-known syringe on view, together with "Abol" insecticide.

The One and All Agricultural and Horticultural Association of 92, Long Acre showed garden seeds and fertilisers.

Mr. G. H. Richards, 234, Borough High Street, London, S.E., had a representative exhibit of the latest and most up-to-date garden sundries and appliances, including insecticides and manures of the renowned "XL All" brand.

Messrs. Robinson Brothers, Limited, West Bromwich, had their "Guaranteed Gardenalities" well to the fore. Among these were "Carmona" Fertiliser and Clift's Fluid, a soil steriliser and germicide.

The French Cloche Company, Caxton House, Westminster, had their well-known cloches, special seeds for intensive culture, and other French gardening requisites on view.

Messrs. Barr and Sons, King Street, Covent Garden, showed the Pinozone Magazine Sprayer, together with Pinozone Essence, which destroys all microbes and germs and is non-poisonous and non-injurious, together with "Phytobroma" and other garden requisites.

The Sanitas Company, Limited, showed their well-known disinfecting fluid.

Mr. Arthur E. Hawker, Mark Lane, E.C., showed Horticol, a most useful preparation for dressing seeds preparatory to sowing, which is a protection from birds and vermin.

Cirengol, a non-poisonous insecticide, was also shown as a remedy for green fly and other garden pests.

Messrs. C. H. Glover and Co., Limited, Old Kent Road, had examples of useful boxes suitable for packing fruit, flowers and other produce.

Messrs. J. Bentley, Limited, Hull, showed their well-known weed-destroyer and fertilising compound.

Mr. F. C. Edwards, Leeds, showed sundries of various descriptions.

Plant Plantoids, 5, Lloyd's Avenue, E.C., the most recently-formed manure and plant food in tablet form, was on view.

Price's Patent Candle Company, Limited, showed the well-known Gishurst Compound, a remedy for insect pests, and Gishurstine for waterproofing boots, &c.

Messrs. Alexander Cross and Sons, Hope Street, Glasgow, were exhibiting their well-known ant destroyer and clubicide.

Mr. John Groom, Seckforde Street, showed artificial flowers of excellent quality and design.

Messrs. Jeyes, Limited, Cannon Street, E.C., had examples of their sprayers and spray fluids on view.

Mr. A. C. Harris, Leicester, showed that useful little article, the "Gripper" garden tool, and also the lawn-mower rabbit-cage.

The Halliford French Garden of Shepperton, Middlesex, showed French garden goods and produce.

Messrs. Lewis Berger and Sons, Homerton, N.E., had several examples of specially-prepared compounds for horticultural use.

Messrs. Merryweather and Sons, Greenwich and Long Acre, the well-known fire-engine manufacturers, had the entire fire protection arrangements placed in their hands, a number of hand fire-pumps and chemical extinguishers being on the ground, with men on duty ready for promptly checking any outbreak that might have occurred.

Messrs. Walter Voss and Co., Glengall Road, Millwall, E., had a large and interesting display

of specialities for various garden purposes. Among these may be noted the Bordeaux-Arsenite wash, this being a compound insecticide and fungicide, which is, therefore, applied at one operation. Another special preparation is a pruning glaze, a preparation for dressing the freshly-cut surface of wounds, which prevents canker or other fungoid growths, and causes a quick and certain healing.

The Four Oaks Spraying Machine Company, Sutton Coldfield, Birmingham, had their noted sprayers and other specialities in many and varied forms.

The Patent Safety Ladder Company, Peterborough, had some excellent ladders in various sizes suitable for all purposes.

The Folding Span Light Company, Wexham Road, Slough, showed examples of their special span lights, illustrating the many uses to which these lights can be put.

Messrs. Wakely Brothers and Co., Bankside, London, S.E., had their well-known Hop Manure to the fore. This is the most perfect substitute for stable manure yet to be obtained, and is clean and sweet to use.

Messrs. James Carter and Co., Raynes Park, had an excellent model of the new buildings at Raynes Park; they also staged an interesting feature of seed testing and germination as carried out by them.

In the Orchid Tent, Mr. Edward White, 7, Victoria Street, S.W., showed a model garden designed for C. Dyson Perrin Esq., Ardross Castle Ross-shire, consisting of castle and broad terrace leading to the sunk garden, followed by a formal design thence to an ornamental fish-pond, rock and water garden, and a general arrangement of effective and artistic planting.

Clay's Fertilizer, the standard plant food, was used throughout the gardens and grounds of the exhibition.

Nesting-boxes were shown by the Royal Society for the Protection of Birds, the offices of which are situated at 23, Queen Anne's Gate, Westminster, S.W.

BOOKS.

La Vie a la Campagne.—This interesting French publication devotes a considerable amount of space to the horticultural art, both practical and theoretical. The artistic also receives consideration, and in the last number to hand (March 15) we find a vast amount of information by Messrs. Maumené, Gibault and Lambert on the subject of decoration in ancient gardens. Beside the text there are nearly two hundred views of old gardens and garden accessories. Statuary, vases, fountains, sundials, pergolas, seats and benches, cascades, and innumerable designs and devices for the ornamentation of gardens are given in great profusion. The collection of so much interesting matter must have occupied the writers for a considerable time, and they are to be congratulated on presenting it to their readers in so attractive a form.

Vines and Vine Culture.—It is with feelings of the deepest satisfaction we see lying before us a fifth edition of this really famous book, with which the name of an old and highly-esteemed friend and a great gardener, Archibald F. Barron, is so closely associated. To his widow, Mrs. Barron,

the work of revising the earlier editions, so as to make the new and present one fully up to date, must have been a labour of love. In that labour she has had the assistance of some of her late husband's devoted friends, and secured from other sources new matter and some fresh illustrations, including bunches of Grapes, all of which add both interest and charm to the book. Unlike some of the would-be instructors of to-day, Mr. Barron was not a great book-writer. This one work on the Vine as it exists, is grown, and now presented will be a garden classic when myriads of the fugitive compilations called books to-day have disappeared. It was Mr. Barron's remarkable fidelity to truth, his energy in obtaining exact information, and, above all, his unrivalled opportunities at the old gardens of the Royal Horticultural Society, Chiswick, where almost every Grape named in the book was grown for trial in some one or other of the houses, that enabled him to acquire information relating to Vines not open to others to obtain. If many years of his life were spent in getting into shape all this information, the present generation of Vine-growers can utilise it to its utmost value if they secure this new edition. We specially rejoice that the revisers have, in their descriptions of Vines, so thoroughly brought the list up to date. New Vines come slowly, happily, and since the 1892 edition there have come into commerce to add to the long list of varieties Diamond Jubilee, Lady Hastings, Melton Constable, Directeur Tisserand and Prince of Wales, of house Grapes; and Gamay Noir, the French wine Grape, and Reine Olga, the red wall Grape, as outdoor varieties. Of the bunch illustrations, new ones are Muscat Champion, Prince of Wales and Syrian, each one good. These are supplemented by several garden decorative Vines of the new or Chinese species, an entirely new chapter devoted to the descriptions of ornamental Vitises being added. We welcome the retention of the picture of the old span vinery at Chiswick, one of the most remarkable vineries ever seen. In that house Mr. Barron found a wealth of material for study. It has long since disappeared, and, like the baseless fabric of a vision, left not a wreck behind. Still also is retained the picture of the great vinery at Cumberland Lodge, Windsor Park. That picture shows it to us as it was many years since, and in its old habitation. Under Mr. Mackellar's régime all is changed. The old vinery and its brick flues have disappeared, a new house has been erected, and the grand old Vine is now in a condition of almost youthful vigour. We could well have wished that, in a book which is to be handed down to posterity as the great Vine book of this age, the text descriptive of the wonderful old Vine at Hampton Court had been brought up to date. That veteran now has a new house larger than its old one. It is in quite robust health, really a marvel considering it has been planted for some one hundred and fifty years. Each year it carries from 250 to 300 bunches of Black Hamburgh Grapes that are so superbly finished and coloured as to be very difficult to excel. It has had a marvellous recovery from the weakness of old age, as has the Cumberland Lodge Vine. We would like to learn that so great was the demand for this most reliable and valuable book that the new edition was soon exhausted. Young gardeners who may wish to know of authoritative or reliable books may be assured they will find one in Archibald Barron's "Vines and Vine Culture." —D.

THE GARDEN, JUNE 8, 1912.

25/6/12

THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY, JUNE 8, 1912.

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VIOLETTAS.

MRS. GARDNER, F.R.H.S., PRIORY HOUSE, STROUD 26th SEASON.

Known all over the World where Plants, Bulbs and Trees can be sent. Thousands upon thousands of Testimonials for Quality, Packing, Freshness and Safe Arrival.

T. W. Hanshaw, Esq., Anerley, London, writes, May 16th, 1912: "Enclosed is cheque and order for further supply of Lilies, etc. I think it is only fair to compliment you on the splendid condition of the bulbs and plants when received, and at the same time to say a word of praise with regard to the manner in which they were packed, it cannot be improved upon I am sure. It may interest you to know that my gardener says the plants and bulbs I get from Priory House are *always miles ahead of those which I order elsewhere.*"

The above original letter can be seen in my office, and thousands of similar ones, gained by sheer merit and superlative value. WHAT MORE CAN BE SAID OF ANY PLANTS.

MAGNIFICENT MIXED LILIES.—Embracing beautiful and distinct varieties, which, both for pot culture and for masses of colour in the open garden, are unsurpassed. They are very hardy, and grow and thrive under almost any conditions. When planted among Roses, any odd nooks round the lawn, or to fill up gaps in the herbaceous border, will reward you with blossoms in autumn that nothing else can equal. 6 for 1/9; 12 for 2/6; 25 for 4/6.

Mrs. FRY, Tunbridge Wells, writes, April 15th: "I am sending you another order for Lilies. Those I had last year were very lovely, and so much admired."

Mrs. BARRETT, Wolverhampton, writes, May 4th: "The Lilies I had from you last season were very beautiful and greatly admired by all."

CLEMATIS DAVIDIANA.—This is a lovely species of Clematis, growing in bush from 3ft. or 4ft. high, and yielding through the summer great panicles of lovely blue flowers, which are exceedingly handsome and very fragrant. The foliage is large and luxuriant, and the plant is, all in all, one of exceptional beauty. It is perfectly hardy in any locality, and blooms profusely when only 1ft. high. This lovely Bush Clematis will be a rare attraction in any garden or border. Plant out splendidly now. Bargain price, 3 for 2/-; 6 for 3/6; 12 for 6/-.

HYBRID PENTSTEMONS.—For grand display in border, plant some of my new Hybrid Pentstemons, which are now rich in variety of colour, in size almost equal to Gloxinias, and have superbly splashed and mottled throats; they are quite hardy and bloom the whole season. Grand large plants. Bargain price, 6 for 1/9; 12 for 2/9; 25 for 5/-; 100 for 17/6.

ANTIRRHINUM.—Something new. Little Bo-Peep Antirrhinum, or the real Tom Thumb; they only grow about six inches high, and are one mass of bloom for months; white, cream, yellow, to rich blood red; and will bloom till severe frost; and start again in early spring. 6 for 1/3; 12 for 2/-.

Also Antirrhinum grandiflora, the new tall giant; monster flowers. Same price as Tom Thumb.

CACTUS DAHLIAS.—Fine large plants, lovely colours; grown from best varieties and seedlings. Bargain Price, 6 for 1/6; 12 for 2/9; 25 for 5/-.

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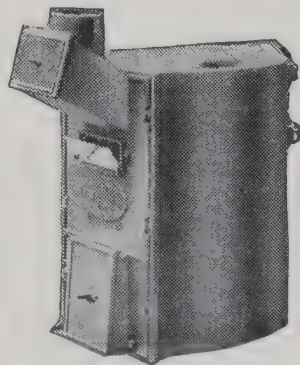
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Illustrated List of GREENHOUSES, CONSERVATORIES, GARDEN FRAMES, &c., free on application. Special designs and estimate submitted on application. Send for particulars of our PATENT ROOF GLAZING. Illustrated book entitled "FOR THE GARDEN" free on request.

W. T. Revitt, Railway Works, Olney

THE GARDEN.

No. 2116.—Vol. LXXVI.

JUNE 8, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Rosa sinica anemonæflora.—This is particularly fine this season with its large silvery pink flowers. It is hardy, and does well when grown up tree stems and on the pergola. It is beautiful for cutting and table decoration. *Rosa L'Idéale* is likewise a lovely early Rose and such a delightful colour; it is exquisite for cutting when grown on a wall.

Rosa altaica.—The variety *spinosissima* is a fine single early white for the shrubbery or Rose walk. This, the earliest of its section and being so hardy, is worth the attention of all lovers of our national flower. *Rosa sericea* and *R. s. pteracantha* are both useful and interesting four-petalled Roses of an early character, the latter having large scarlet, transparent thorns, which are pretty when the sun shines upon them.

The Chinese form of *Primula sikkimensis*.—This is one of the attractive plants which have delighted visitors to the beautiful rock garden at Kew, which has been looking very well this year, although the reconstruction which has been effected has prevented some plants from attaining their full development as yet. This Chinese variety of the Sikkim Cowslip is a more handsome plant, with larger flowers than those of its kinswoman, but apparently more closely clustered. They are of the same pleasing shade of yellow, and this Chinese form appears as if it would have a future before it, seeing that it also looks rather taller than *P. sikkimensis* as we usually grow it.

***Primula pulverulenta* Mrs. R. V. Berkeley.**—Lovers of the hardy Primulas could not have failed to admire this plant as shown by Messrs. James Veitch and Sons at the International Horticultural Exhibition. Those who observed it were practically unanimous in agreeing that it was one of the best of the new hardy plants in the exhibition, and that was saying a good deal. Its handsome stems, mealy, like those of *P. pulverulenta*, bore fine whorls of white flowers, touched with crimson at the base. If a pure seedling of *P. pulverulenta*, it shows the close relationship existing between that plant and *P. japonica*, as the whole plant bears an unusually strong resemblance to a white *P. japonica*, though in a glorified form.

***Pinguicula grandiflora*.**—Few people seem to grow the large-flowered Butterwort, although it is by no means a difficult subject where there is a moist spot in the garden, such as that in which *Primula rosea* will flourish. Even our native Butterwort (*Pinguicula vulgaris*) looks pretty in such a place with its violet flowers, but it is eclipsed in beauty by its ally, which has larger and brighter-coloured blue flowers. A nice group of this appeared in one of the rock gardens at the Chelsea exhibition, but it did not attract the attention it

deserved as a good group of a plant little met with in the rock garden of the present time. The fact of its loving a moist bog will commend it to those who are making a feature of a water and bog garden, and who wish to choose plants not too large and possessing all the charms of the finest of the alpine flowers.

Beauty of the Rocks.—This is the popular and well-deserved name given to *Draba pyrenaica*, a charming little alpine plant, native of the Pyrenees, and often called *Petrocallis pyrenaica*. It requires a very gritty soil, and thrives when packed between small stones, such as one would provide in a moraine garden. The flowers, rosy lilac in colour, are produced throughout the spring months.

National Hardy Plant Society.—The first exhibition of hardy plants and flowers under the auspices of the above society will take place in the Royal Horticultural Hall, Vincent Square, Westminster, on Wednesday, June 19. In addition to the classes set forth in the schedule, we learn that Messrs. Sutton and Sons are offering prizes for six bunches of Sweet Williams, both pink and scarlet. All communications respecting the show should be addressed to Mr. A. J. Macself, 52, Beechfield Road, Finsbury Park, London, N.

***Tulipa Sprengeri*.**—This is still the latest of the Tulips to flower, and it comes in very usefully and pleasingly after the Darwins and other late flowers are over. It has not yet, apparently, given us a variety of colour, but the rich orange scarlet flowers with golden anthers are bright and showy. Probably it will some day prove the parent of a late-flowering race of Tulips, which would prolong the succession for a considerable time after the others had passed away. Sprenger's Tulip is about one and a-half feet high, and has the flowers of good size for the stature of the plant. It seems to be thoroughly hardy, though not increasing much by offsets, and flowers annually on rockwork and in the border.

An Uncommon Arrangement.—An exhibit in the big tent at the recent International Horticultural Exhibition at Chelsea, which attracted a good deal of attention from its unorthodox character, was an arrangement of *Statice profusa* and Malmaison Carnations from Mr. Leopold de Rothschild's garden at Ascott, Leighton Buzzard. The groundwork consisted entirely of dwarf, well-flowered examples of *Statice profusa* disposed rather thickly. Springing from this groundwork were fine clumps, each consisting of several plants, of three or four varieties of Malmaison Carnations, among which that popular variety, Princess of Wales, was very noticeable. The bed, in shape somewhat like an elongated crescent, was edged with *Isolepis gracilis*, a charming subject for such a purpose, though not used now to the same extent as it was at one time.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Narcissus Poetaz Orient.—I can endorse all that the Rev. J. Jacob says about this variety. It is a most charming flower to grow in pots, and is a wonderful laster.—H. G. H.

Rosa Hugonis.—This Rose has been very early with me this year; in fact, so early that the frost has destroyed quite half of the shoots, which were covered with buds, and I am afraid they will not break again. Is it supposed to be quite hardy? I have had it in my garden three or four years, and it has not before been affected by frost.—H. G. H., *Strode*.

Euphorbia Wulfeni.—I enclose a photograph of *Euphorbia Wulfeni*, which may interest your readers if you care to reproduce it in *THE GARDEN*. I have had it for four years, and this is the first time it has bloomed, and of the 2,500 different plants in my collection, none has caused greater interest and surprise to the hundreds of visitors who avail themselves of the opportunity of inspecting my alpine and herbaceous garden. There are no less than twelve spikes of bloom open.—ALBERT WOOD, *Sutton Coldfield*. [This interesting *Spurge* has been the subject of much correspondence in our pages. An illustration appeared in *THE GARDEN*, January 22, 1910. Unfortunately, the photograph sent by our correspondent is not suitable for reproduction.—ED.]

Choisya ternata.—On page 250, issue May 25, of *THE GARDEN*, "A. D., Kingston," has a note on this plant as grown in the public gardens there, and expresses surprise at seeing such a fine specimen and its apparent hardiness. I am quite sure that many readers would be similarly surprised, as it is regarded as a shrub only suitable for growing outside in very sheltered positions. If grown in firm, suitable soil, however, *Choisya ternata* will succeed in any open border in gardens south of the Midlands. Twenty-five years ago I had a cutting given me, which was rooted in due course and planted outside in a partially-sheltered position. The roots grew mainly under a path which was traversed more than any other in the garden, so that the rooting medium was a very firm one and not at all rich. In seven years the bush had grown many feet through and 5 feet high. It is a great specimen at the present time, notwithstanding the severe and frequent cutting back of the branches. It has flowered profusely, and never suffered in the least from frosts in that long period. It certainly deserves to be more extensively grown as a hardy flowering shrub than at the present time.—G. G.

— I venture to think this beautiful shrub is much more hardy than your correspondent, "A. D., Kingston" (page 250, issue May 25), seems to think. My garden is situated in a bleak spot in Cheshire, 250 feet above sea-level, exposed to heavy gales from the Irish Sea, and yet this evergreen blooms more or less every year, and is at present covered with bloom, although we had 20° of frost last winter. It is true we place mats round it in winter. It is 4 feet high and 5 feet through. I have another plant about half the size, and we have no difficulty in striking cuttings from it. I fancy there is too much hesitation in trying supposed tender evergreens in the North of England. For instance, *Olearia Haastii*, which Robinson says may thrive in favoured spots in the South, thrives in this neighbourhood, and never fails to bloom profusely

every year without any winter protection. I have more than a score of plants 3 feet and 4 feet high and 4 feet through. Even *Olearia dentata*, which is certainly more tender, has grown with me 5 feet high, and is covered with bloom in July. *Eurybia Gunnii* is more uncertain, though it has survived the winter, and is now blooming on all the points not cut by the frost.—S. A. D., *Noctorum*.

Geranium Hall Caine.—This variety is very showy and well worthy of special mention. The colour is salmon, and the inflorescences are borne freely on a bold, long axis. The individual flowers often measure 2 inches across and possess qualities of a very lasting nature; moreover, the foliage is large and ornamental, having a noticeable brown zone that is deepened by the application of soot-water. In my judgment it is one of the best *Geraniums* extant for greenhouse decoration.—GEORGE H. COPLEY, *Horton Park, Bradford*.

Manures to Deepen the Colour of Roses.—With reference to the paragraph on the third page (251), signed "P.," of *THE GARDEN* for May 25, I may mention that sulphate of iron (greenstone) has been found to effect this, as also to strengthen the scent. When in India, at Almera, Kumaon, U.P., in the early seventies, I used to experiment a little in this way, planting ten Roses of a similar variety in a row, separated from each other, and feeding them with different manures—burnt brick, sulphate of iron, horse, cow, goat, sheep, rabbit and poultry manure. The sulphate of iron always brought out a fuller and richer colour and scent, while the animal manures brought on the foliage. Wakeley's Hop Manure has a similar effect, deepening the colour of Roses, and also helps the plant generally. I got the idea of experimenting with manures from a manual on Indian gardening by a Madras Army officer whose name I have now forgotten.—H. G. BATTEN, F.R.H.S., F.N.R.S.

Horticultural State Honours.—It is greatly to be hoped that the honour of knighthood so fitly and so aptly conferred by His Majesty the King on Mr. Harry J. Veitch is but the prelude to others that may well be merited. Horticulture, so far, in its relations to the State does not seem to have obtained in the past the high position it deserves. There have been knighthoods given for distinguished botanical service; and, indeed, the one which pleased us all, the granting of that honour to Sir F. W. Moore of Glasnevin, was awarded more for botanical research than for horticultural status. But Mr. Veitch is a thorough horticulturist. Apart from being the head of the greatest nursery establishment in the kingdom, he is far more widely known as a great gardener and as a friend of gardeners; hence that widespread approval heard and the pleasure given. But the announcement made by Mr. Runciman at the jurors' luncheon of a probable intention on the part of the Board of Agriculture to establish a horticultural diploma opens up a wide prospect both of honours and of anticipations. But to myriads of great and good gardeners there is a large fly in that State pot of ointment. It is in the form of examination tests which seem to be foreshadowed. Other than the splendid work they have been doing for horticulture all their lives, what better test is needed as to the merits or fitness of those able men, many of whom have passed into the sere and yellow leaf of life and could not pass a paper examination as young, inexperienced, but well coached, students can? Fancy putting to the test of a paper examination

on Orchid culture the grower of that magnificent group of Orchids staged at the great show from Westonbirt! Who will test the knowledge in fruit culture of those great gardeners who figured so finely also at that show? To attempt any such test would be utterly absurd. If a State diploma be established, awards must be made on the basis of work done rather than on a written test. In the case of young candidates who have so far no work to show, their admission to the diploma must be only after severe examination tests—first, scientific, and, second, practical. A wide knowledge of entomology and mildews is most valuable; but the good, capable cultivator who fights these enemies with high-class culture and good treatment is generally the better gardener. There are other ways, however, than through the State that honours may be given to men who have done good work in gardening. Sir George Holford at the jurors' luncheon illustrated that method in the public way he complimented his able Orchid-grower, Mr. H. G. Alexander. Why should that incident be so singular? How few great employers, gentlemen or traders, have previously done so much, and yet pages of *THE GARDEN* could be filled with the names of men who in private work and in trade have rendered to horticulture magnificent service; indeed, it is they by their skill, their industry and hard labours who have made our beloved vocation what it is. What an army of these there are who have over and over again earned their proposed diplomas!—D.

Varieties of *Leptospermum scoparium*.—Although visitors to the recent Royal International Exhibition on the look-out for the more gorgeously-coloured subjects might have passed it over without notice, yet to many one of the most interesting exhibits in the large tent was a group of three distinct varieties of *Leptospermum scoparium*, shown by the Rev. A. T. Boscawen, Long Rock, Cornwall. The typical *Leptospermum scoparium* is a native of Australia and New Zealand, and in both cases it covers considerable tracts of country. In New Zealand, where it disputes the right of way with the common Bracken, it is said to vary in height from 1 foot to 20 feet, and during the flowering period from November to January it is very handsome, but when out of bloom the greyish green of its foliage forms a monotonous feature. In this country it is a delightful shrub for particularly favoured spots in the West, but throughout the greater part of England it can only be regarded as an ornamental subject for the greenhouse or conservatory. Botanically, it belongs to the same family as the Myrtle; but though the leaves have somewhat of the aromatic fragrance common to the genus, yet it is far less pronounced in this than in many others. The leaves have before now been sometimes used as a substitute for tea; indeed, this *Leptospermum* is often known as Captain Cook's Tea Plant. Of the three varieties above alluded to, the most striking is *Nichollii*, which was illustrated in *THE GARDEN*, page 264, and was given a first-class certificate by the floral committee. In this, instead of the flowers being white or nearly so, as in the typical kind, they are of an intense ruby red colour, a tint quite startling to one accustomed only to the light-coloured forms. The second variety, *Chapmannii*, is of more upright growth than the others, while the flowers are of a rosy red hue. In the third, *Boscawenii*, the plant is unusually loose and graceful in habit, while the comparatively large flowers are almost white with a red centre, the buds being bright red.—H. P.

Salvia splendens Pride of Zurich.—The day is not so very long past when *Salvia splendens* was chiefly regarded as a flowering subject for the embellishment of the greenhouse or conservatory during the autumn months. With the advent of some dwarfier forms, of which *Pride of Zurich* is one, this is all changed, and now for the last two or three years it has, at the meetings of the Royal Horticultural Society, figured among the spring flowers. At this season it is very bright and effective, but its greatest value is for bedding out during the summer months, at which time its brilliantly-coloured flowers form a notable feature. It is also of considerable service for greenhouse decoration. Seeds of some of the varieties are occasionally offered; but for freedom of flowering in a small state I much prefer to strike them from cuttings, which in a gentle heat will root in a very short time. My experience of seedlings is that they are more liable to run up during their earlier stages than those propagated from cuttings.

Shrubby Marigolds.—The immense Composite Order is freely represented in South Africa, of which continent the various species of *Arctotis*, or Shrubby Marigolds, are native. They were especial favourites of that enthusiastic plantsman, the late Mr. W. E. Gumbleton, whose collection contained some unique forms. As it is, they are difficult to obtain from nurseries, the most generally met with being *Arctotis aspera* and *A. aureola*. Of these I prefer the last-named, the flowers being about four inches across, with the spreading ray florets of a rich orange yellow colour. In *A. aspera* the florets are of a pale yellow or straw colour, with a deep yellow disc. The "Dictionary of Gardening" gives 1710 as the date of the introduction of both of these species, yet, pretty though they are when in flower, they are rarely seen. The nomenclature of the entire genus is considerably involved, for in some cases at least authorities agree only to differ with regard to the correct names. Their cultural requirements are not exacting, as they need much the same treatment as a *Pelargonium*.—H. P.

A Little-Known Rock Garden Plant.—The fine little plant *Erodium pelargonifolium* is but little noticed in horticultural works at the present time, and the question of its hardiness is worth some consideration, as it is now coming into bloom, and is one of the finest rock garden plants, with its white flowers prettily marked with purplish crimson. Both in flower and leaf it has a considerable resemblance to the old *Pelargoniums* which were so popular for growing under glass and are still prized by many. It is totally unlike the other *Erodiums*, and is a handsome rockery plant, making a good trailing bush of considerable effect and of much real beauty. It is, however, a

plant which requires some care with me, also with a considerable number of others who have tried it. It appears to require occasional propagation, either from seeds or from cuttings, and the latter method is the more convenient, as the seeds may be forgotten when ripe, while cuttings can be taken at practically any time in summer and strike easily, just as one would strike a *Zonal Pelargonium*. The difficulty lies in keeping old plants, as, while a young one will stand the winter well in most cases, a larger plant will die. It is, therefore, almost essential to keep a plant or two in a frame if *E. pelargonifolium* is not to be lost. It apparently delights in a warm, dry soil and a



SIR HARRY J. VEITCH, V.M.H.

sunny place, where it soon attains some size and looks remarkably pretty.—S. ARNOTT.

FORTHCOMING EVENTS.

June 10.—United Horticultural Benefit and Provident Society's Committee Meeting.

June 12.—Royal Cornwall Show at Penzance (two days). East Anglian Horticultural Society's Meeting.

June 18.—Royal Horticultural Society's Meeting and *Gladiolus* Show. Lecture by the Rev. Professor Henslow on "Professor J. S. Henslow as Ecologist."

SIR HARRY J. VEITCH, V.M.H.

THE honour of knighthood that has fallen to Mr. Harry Veitch is as popular as it is well deserved, for there is no man in the gardening fraternity more worthy or better fitted to adorn the rank to which he has been called.

His energies towards the success of the recent International Exhibition are well known, and merit the sincere thanks of all horticulturists and thousands besides. The honour is more than a personal one, for it is a tribute to British horticulture and a fitting commemoration to an eventful

year. Sir Harry's long association with the advancement of horticulture in this country is a matter for general admiration, and his experience of International exhibitions is unique. When it was determined to hold the great International Horticultural Exhibition in 1866 in London, he entered with zest into the work as one of the general committee. At the Continental gatherings during the past forty years or so, Sir Harry has been a constant visitor, and it is of special interest at the present time to observe that he was present at the first International exhibition ever held in Russia, this occurring at St. Petersburg in the spring of 1869, when the party, among whom were Sir Joseph Hooker, Dr. Robert Hogg, Dr. Moore of Glasnevin and Mr. Robert Warner, were cordially welcomed by the Czar.

Sir Harry J. Veitch was born on June 29, 1840, at Exeter, and received his education at the Exeter Grammar School and in Germany. He afterwards attended the course of botanical lectures given by Dr. Lindley at the University College, and gained an insight into the working of the seed department of the business which he was soon to manage in the establishment of Messrs. Vilmorin at Paris. Sir Harry is known for his splendid business capacity and his untiring energy in promoting good work. It is well over fifty years ago since he commenced his duties in the Chelsea nurseries, and to-day throughout the world wherever horticulture has gained the affections of the people the name of Veitch is honoured.

It seems almost unnecessary to write of his love and devotion to the Gardeners' Royal Benevolent Institution. Moreover, he is an active supporter of the Royal Gardeners' Orphan Fund, and has been closely associated with its good work from the commencement.

Many are the tokens of the esteem in which Sir Harry and Lady Veitch are held by those with whom, during a busy and happy life, they have been brought into contact. That they may live for many years to enjoy their well-deserved honour is the sincere wish of their numerous friends at home and abroad.

TREES AND SHRUBS.

HARDY SHRUBS WITH PEA-SHAPED FLOWERS.

I NEVER remember seeing the Wistarias quite so good as they have been this season. Even the old forms were larger and more beautiful than ever. Those growing on the mansion and on south walls and those trained up tripods were beautiful in the extreme. Some time since they were planted on a train over large trees, where they look most beautiful and are always effective. The frost in April took some of the blooms, but did not do much damage; it simply thinned them to make the remainder all the stronger. When associated with Laburnums they are glorious, and trained along the top of a high wall and the top fringed with the blooms it is really a marvellous sight. These plants like a little assistance when planted near large trees, and the roots of the trees should be kept as clear of them as possible. There are some marvellous specimens about the country, but they are very often in out-of-the-way places. My employer has told me that he knew of one fine plant which was nearly a quarter of a mile long, trained over the mansion and around all the garden walls. The newer variety, *multijuga*, has much longer racemes of flowers, and is very handsome.

The Brooms.—At this season the Brooms are very handsome garden subjects, especially *Cytisus præcox*, *C. p. alba* and *C. andrea*. Then there is the Madeira Broom, *C. virgatus*, which makes a fine tall plant and flowers later, generally at its best in June; this is an evergreen. *C. nigricans*, the summer-flowering type, flowers in July and August. Then the old common Broom, *C. scoparius*, is very fine in its season. *C. schipkaensis*, a dwarf grower, with creamy white flowers, is a fine dwarf plant and a good one when grafted on a stock 4 feet or 5 feet high. *C. kewense*, a dwarf, trailing variety raised at Kew, is very pretty and bears its creamy flowers freely in May. *C. Beanii*, with its bright yellow flowers, is also an attraction. *C. Ardoinii*, a very pretty species about four inches high, forms a mass of golden flowers in April.

Genistas.—*G. prostrata* is a very pretty and useful plant for bare spaces on account of its trailing and spreading habit, and only grows a few inches from the ground. *G. monosperma*, a rare species with white flowers, is inclined to be somewhat tender; this should always be planted in a warm and sheltered spot. *G. hispanica* is a rare free-flowering species and a good grower. *G. horrida* makes a fine plant, and has sharp-pointed leaves. *G. decumbens*, a very pretty trailing variety, is suitable for the alpine and rock garden.

G. tinctoria, a dwarf, compact, creeping plant, bears orange flowers in July and August. There are many more forms and varieties, but I have given enough to show their extreme usefulness.

The Rose Acacia (*Robinia hispida*).—This is among the most beautiful of all flowering trees and shrubs.

Cæsalpinia japonica is another most beautiful shrub.

The Honey Locust (*Gleditsia triacanthos*). is also very beautiful and well worth growing.

flowers. These trees, when used for planting extensively, are very effective. If used alternately with such trees as Copper Beech, *Prunus pissardii* or trees of that character, a wonderful contrast of colour is produced. There are no trees capable of greater effect if planted in bold groups or by the hillside, water-side, park drive or avenue; in fact, one can scarcely plant these trees in the wrong place.

Desmodium penduliflorum is a very pretty Japanese shrub with wand-like, gracefully arching shoots which grow 5 feet to 6 feet long, and are clothed with large leaves and bear panicles of reddish purple, Pea-shaped flowers in August and September, when few shrubs are in flower.

W. A. Cook.

Leonardslee Gardens, Horsham.



SPRAY OF A BEAUTIFUL TREE (*EDWARDSIA GRANDIFLORA*)
BELONGING TO THE PEA FAMILY.

Judas Tree (*Cercis Siliquastrum*) is a very old introduction and still one of the most lovely. It grows into a tree 30 feet high, and bears rosy purple flowers in great abundance along the branches before the leaves appear. It is in flower now and most attractive.

Edwardsia grandiflora (syn. *Sophora tetra-aptera*) is a most beautiful plant for a wall, and few things are better. See illustration. Then we have the very handsome

Laburnums, which are particularly showy, to say the least, especially the variety *Vossii*, which has very long trusses of rich pale yellow

KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Scarlet Runners.—This is one of the most important crops of the vegetable garden, but its full value is not usually appreciated until the bulk of the Green Peas are passing, or have passed, their best. With a view to ensuring heavy crops on plants full of vigour late in the season, the seeds ought not to be sown at the middle of May, or even earlier, as many amateurs do, but during the first week of the present month. The soil is warm, and it can easily be made pleasantly moist, if it is not in that condition naturally; there is no danger of late frosts causing a more or less severe check; and the plants, therefore, have every inducement to go straight ahead to profitable bearing. It is necessary to provide a rooting medium which is at once deep and in excellent heart, and the seeds ought to be set at distances varying from 5 inches to 12 inches asunder, according to the variety, on a firm, level base about two inches beneath the surface of the ground. At the end of each line have a clump of a dozen seeds or so, from which plants can be drawn to fill gaps that may occur in the rows. Abundance of space goes for excellence of quality, bulk of crop and longevity of production in the plants.

Outdoor Tomatoes.—One would hesitate to recommend the planting of Tomatoes in the open quarters of many gardens for a week or ten days yet; but when they are intended for positions against warm walls or fences, the sooner the work can be done the better. It is then by no means difficult to provide protection, should the necessity for it arise, but this cannot always be managed in the open garden. In either case it is essential that the soil shall be in perfect mechanical condition, and that it shall contain readily available food; but the incorporation of fresh manure must be done with great judgment, or the plant

will rush to leaf growth at the expense of flower and fruit production. It is much wiser to give a really good, plain soil to start with, and feed as may be deemed wise or desirable when the roots are properly established. Each plant for outdoors should carry a truss of fruit and a truss of flowers when the planting is done to ensure the best returns.

Plants in Seed-Beds.—There will be a few thousands of plants in seed and nursery beds just now, and it is essential to the successful cropping of the garden in the winter that these youngsters have every inducement to make strong, sturdy, stocky growth. To allow them to become so crowded that they grow up into leggy, ungainly examples is an error that positively must be avoided, since such specimens can never make splendidly profitable plants when the call is on them next winter and spring. Therefore thin them out and transplant them to other positions immediately they demand more space, and see to it that they never suffer through lack of food owing to the soil about their roots becoming as dry as dust. No weeds ought to be tolerated in the seed or nursery beds, because they rob the plants of light and air as well as food.

Vegetable Marrows.—These ought to be placed in their permanent positions as soon as possible, as they demand a considerable time to grow into the fruiting stage. They are often put on heaps of soil or manure, and provided they do not grow too rampantly, they then occupy places where nothing else would crop. Or a hole can be taken out, filled with manure and surfaced with a good dressing of sweet soil, and the planting can be done on the slightly-raised summit. The bush varieties should be far more extensively grown in small gardens, as they bear magnificently and do not demand a serious amount of space. Seeds pressed into the soil now, if it is fertile and in good condition, will grow and fruit well in due course.

Hoeing.—The Dutch or draw hoe ought to be incessantly at work in the vegetable quarters from now onwards to the end of the growing season, and those who neglect it may rest assured that they will lose a substantial proportion of the value of the food which has been worked into the ground for the benefit of their crops. It is impossible to hoe too much, never, of course, attempting it



ROCK GARDEN EXHIBITED BY MR. MAURICE PRICHARD AT THE RECENT INTERNATIONAL SHOW.

when the surface is wet. Weeds not cut out by the hoe must be removed by hand. H. J.

THE ROCK AND WATER GARDEN.

ALYSSUMS IN THE SPRING GARDEN.

THE genus *Alyssum* embraces a group of plants that combine beauty and utility in a marked degree and are more or less indispensable in every garden. The colour range is restricted to yellow, as those having white flowers are not important enough from the garden aspect to merit attention. Curiously enough, this genus supplies a colour deficient in *Aubrietia* and *Arabis*, with which it is commonly employed in the rock garden; hence it is apparent how important *Alyssums* become in this floral tripod. Although chiefly alpine in character, *Alyssums* readily adapt themselves to ordinary conditions in gardens, always succeeding best in hot, sunny exposures such as the rock garden offers; they are also most satisfactory subjects for dry walls, where the growths have every opportunity of becoming ripened under the concentrated power of the sun's heat. They are not particular as to soil, provided it is light, well drained and contains a fair percentage of lime, as under these conditions growth is always

most satisfactory and the floral display is well assured.

Propagation.—All the species and varieties are easily propagated by seed or cuttings. The former may be sown as soon as ripe, or may be deferred till spring, using shallow pans and sandy soil, transplanting the seedlings into pots or boxes when large enough to handle. Artificial heat is never necessary. An ordinary greenhouse in which to germinate the seed and an unheated frame in which to stand the seedlings are valuable aids towards early propagation, although equally good results may be obtained by sowing late in an ordinary garden frame. *Alyssum saxatile* and its lemon-coloured form are both largely employed in spring bedding arrangements, and where a large quantity is required it will often be much simpler to dispense with pots and transplant the seedlings direct into boxes, afterwards transferring to a nursery bed in the open. If carefully lifted in autumn, little or no check is occasioned the plants, as owing to double transplanting in the early stages an excellent fibrous root system is developed.

Cuttings may be used with equal success. They are best taken when the current season's wood begins to harden, towards the end of June or early July. The cuttings are inserted in sandy soil in a hand-frame and kept close till such time as roots are formed, afterwards transplanting to pots or boxes, as is most convenient.

The Best for the Garden.—*A. saxatile* is the best-known species. It makes a vigorous, rounded bush up to 18 inches in height. The flowers are borne in close, branching heads of a rich buttercup yellow, and are produced in the greatest profusion, so that even a single plant becomes a most conspicuous object when in flower. The leaves are lanceolate, entire and of a hoary grey green, while the stems are woody at the base. Of this species there is a double form, dwarfer than the type, with flowers resembling small double rosettes. It is a first-rate rock plant, and remains in flower from April till June. The variety *citrinum* is one of the most effective colours in the spring garden, the flowers being of a delicate lemon or sulphur tint. In other respects it resembles the type. There is also a form having the foliage prettily variegated with creamy white, the colouring being best developed when planted in full sun. It is most useful for contrast, and is greatly favoured in carpet-bedding and similar arrangements. *A. alpestre* is a typical alpine species, forming neat, rounded tufts of hoary leafage that in May and



MR. J. WOOD'S ROCK GARDEN FROM BOSTON SPA AT THE INTERNATIONAL SHOW.

June become almost hidden by the wealth of rich yellow flowers that burst from the tiny stems. It is a dwarf subject, and rarely exceeds 3 inches in height.

A. montanum is more prostrate in habit than the last-named species. The stems and leaves are hoary green, the former terminating in simple racemes of bright yellow flowers that are freely produced in May and June. This and the previous-named species are ideal plants for any old wall, as if once established they live to a great age, never failing to flower in their appointed season.

Coombe Court Gardens.

THOMAS SMITH.

THE DRIPPING WELL AT KEW.

VISITORS to Kew Gardens on passing through the rock garden cannot fail to notice the dripping well. It is a cool retreat, suitably furnished with rock and water-side plants. A slight fall of water

THE ROSE GARDEN.

ROSE BLANC DOUBLE DE COUBERT.

THIS charming Rose is ever welcome, for it is the first to yield its blooms, which are quite dazzling in their snowy purity. I had a fine standard of it on May 29 in full bloom, and near by are arches of Carmine Pillar just unfolding, which tend to accentuate the pure whiteness of the rugosa Rose. To see this Rose in perfection one must grow it as single bushes or on standards and half-standards, but it also makes a fine hedge. I admire the Blanc Double de Coubert more than the single white, although this latter is very beautiful, and, of course, has the good quality of giving us fine showy fruits in the autumn, which Blanc

charming Roses that possess so weak a constitution that they cannot fail to disappoint the average grower who is not aiming for one or two flowers only. Of course, with the vast number of varieties now grown, no catalogue or list can give much fuller descriptions than at present, and we can scarcely expect the vendor to lay any emphasis upon qualities not eminently desirable.

It is my purpose to note a few of the varieties I could not recommend to any small amateur grower. No elaborate description of the bloom itself comes within the province of this article, and while I by no means wish to malign the varieties, it is well to know a little more of their characteristics of growth and flowering. Duchess of Bedford is a grand Rose for the exhibitor, especially when he can afford to bud his own Briar stocks and cut from maiden plants. But I find it by no means a good Rose to transplant, and in most places it is weak and short-lived after the first season. Gustave Piganeau, Alfred K. Williams, Comtesse de Ludre, Louis van Houtte, Reynolds Hole and Xavier Olibo are other truly beautiful Roses among the Hybrid Perpetual class that have much the same characteristics as Duchess of Bedford.

Another class of growth is found in the same section that, while not dwindling away in a similar manner, are usually too short and stumpy in growth to please. Nor can a short, stumpy growth possibly produce any quantity of flowers, and there can be little object for the small grower to have either of those named when there are numbers of good growers and free bloomers closely resembling them in all other respects. I will name Etienne Levet, Ulster, Marie Verdier, Marchioness of Downshire and Merveille de Lyon as examples.

Roses with Slender Stems.—Yet a third class can be taken from the Hybrid Perpetuals, and they are those with a persistent drooping habit, and generally carrying heavy flowers upon stalks and growths far too slender to support such a burden. Consequently, one has to expend a lot of time in tying up the growths, or the blooms are entirely

spoilt by earth splashings. Earl of Dufferin cannot be dispensed with in a large collection, but the buds are of immense size and substance, needing a long time to develop. I have frequently had it extra good during a warm season; but it always droops and is of little service unless great care be taken, and then only when cut and the flower supported in some way. Gloire de Margottin, Camille Bernardin and Marie Baumann are further examples. The only phase of culture suitable for a drooping flower is upon tall standards, pillars and walls. Then one can see into the depth of the flower; but, unfortunately, this habit of drooping means much greater attention in culture. Hitherto the Hybrid Perpetual section is the only one dealt with, but other sections possess varieties with precisely the same undesirable characteristics. To take the Teas and Noisettes first, I will name a few that are constitutionally too weak to throw many flowers, and so generally die out, to the bitter disappointment



AN ESTABLISHED DRIPPING WELL IN THE ROCK GARDEN.

trickles down between the rocks and collects in a pool, whence it takes the form of a little stream. As may be seen from the illustration, this stream serves to supply such plants as Wood Lilies (*Trilliums*) and Globe Flowers (*Trollius*), both of which are in flower, with the requisite amount of water. The surrounding rocks are suitably planted with ferns and Saxifrages, while bold clumps of the perennial Candytuft (*Iberis sempervirens*) create a fine display all through May and in early June. At no time is this delightful spot devoid of interest, and it is here, in damp but well-drained soil, that *Soldanella*—the daintiest of all alpine plants—looks almost as happy as it does in its mountain home. It might here be mentioned that the whole rock garden at Kew is so constructed as to appear like the rocky course of a mountain stream. Such streams often dry up in winter, and are bounded by rock-piled banks, amid the crevices of which a copious summer vegetation springs up.

Double de Coubert does not. I would suggest to anyone who would like a good contrasting bed of Roses for early June flowering to plant this variety as half-standards, with the crimson Mrs. Anthony Waterer beneath. Such a bed well isolated would be a most beautiful feature in any garden.

ROSES UNSUITABLE FOR SMALL GROWERS.

UNFORTUNATELY, we have several varieties of Roses—and these among the most beautiful as individual blooms—that are decidedly unsuited for the grower with little space or cash. I do not think there is enough note made of this suitability or otherwise, and far too often the flower itself is dwelt upon minus any definite remarks about its adaptability to the needs of the small grower. Some Roses are certainly more shy-blooming than others, even when grown by the most experienced. Then, again, there are not a few

of the small grower, who has probably obtained the variety after seeing a grand specimen in the exhibitor's box. I remember the glorious flower of Cleopatra exhibited at Windsor many years ago. The reverend gentleman who grew it noticed me taking its dimensions, and, after seeing how surprised I was, told me he thought I should be even more surprised if I could see the plant (?) he cut it from, for, said he, "that is all there was of it!" As a rule, Cleopatra is small and with long buds. Of course, the plant alluded to was thinned out to one bud only, and, being upon an extra vigorous growth for this variety, gave an abnormal bloom.

But few small growers can afford to grow upon these lines. Mme. Cusin, Mme. de Watteville, Golden Gate, Ma Capucine and Niphotos are others that may be classed with these. The thinner and softer petals among the Teas and Noisettes often make the blooms difficult to open, the petals rotting before the centre has developed. Jean Ducher and Etoile de Lyon are examples.

Among the newer section of Hybrid Teas we find several that are only fit for the exhibitor's box, and then solely when a large number of distinct varieties are wanted. Lady Mary Fitzwilliam, Mildred Grant and White Lady certainly produce wonderful flowers, but there are so few of them and they are bad growers. Others in this section that I cannot recommend for general culture are Bessie Brown, Queen of Spain and Ernest Metz. Neither can be relied on. A. P.

ROSE MME. MAURICE DE LUZE.

It is not many of our present-day novelties that can truly be claimed by the exhibitor as well as by those who desire to decorate their gardens. But such is the case with the Rose illustrated herewith. Without a doubt it is one of the best M. Pernet-Ducher has given us, and this is saying a good deal. Its large, deep rose pink blooms have a wonderfully clear hue about them, and this is much accentuated by the beautiful bold petals—like huge shells. Then, too, the fragrance is delightful, of that unctuous sort that is so refreshing. It is a bushy grower, not rampant, but compact, and it would make a nice, even bedder, one that would yield plenty of superb blooms upon good, erect growths. M. Pernet-Ducher in 1907 sent out three really fine novelties, one of them the above-named Rose, one Laurent Carle, and the third Mrs. Aaron Ward, and all three have established themselves quite securely in our collections. P.

THE FLOWER GARDEN.

THE VIOLETTAS.

[See coloured cover.]

THESE miniature-flowered Tufted Pansies are essentially plants for the rock garden, where, provided good soil and an adequate amount of free root run are assured, they invariably do very well. To the late Dr. Charles Stuart of Chirnside, N.B., belongs the credit of having raised the first Violettas. In 1874 he succeeded in crossing Pansy Blue King



A BEAUTIFUL HYBRID TEA BEDDING ROSE MME. MAURICE DE LUZE.

with Viola cornuta of the Pyrenees, and the progeny of this interesting cross gave us many most pleasing variations. In 1887, among a batch of seedlings, there appeared a lovely white blossom of miniature proportions and distinctly sweet-scented. This plant was named Violetta. Half-a-dozen good varieties are Lavinia (blush lavender), Gertrude Jekyll (rich yellow and primrose), Violetta, Diana (primrose), Eileen (blue), and Grace (pure white with neat yellow eye). All Violettas are rayless and sweet-scented. Rock Yellow is a more recently raised rich yellow sort. D. B. CRANE.

SWEET PEA NOTES.

Vases for Exhibiting.—If the stock of vases which will be required for the fast approaching show season has not yet been overhauled, it is imperative that it shall be put in hand forthwith. It is inevitable that a few will be broken or lost each season, and nothing is more irritating when one is putting together the many things for an exhibition than to find that there is a shortage of vases—one might almost as well find one's self short of excellent flowers. Many growers adhere

strictly to a particular pattern of vase, and the system has much to commend it, since one knows precisely what is wanted to fill it to the best effect. It may, however, cause more than ordinary trouble, because one seldom lives within a stone's throw of the emporium from which the chosen pattern can be purchased; hence the paramount importance of a close inspection of all in hand a few weeks before the actual time of use, as one can then easily procure the requisite new ones to complete the set and leave a few over for casualties.

Material for Shading.

Perhaps what is known as butter muslin is the most popular of all materials for this purpose; but whatever may be utilised must be inspected at once with a view to seeing whether there is sufficient in hand for the season, and if it is in sound condition. The work of examination will not occupy many moments, and if it is ascertained that the quantity is short or that the material is worn out, a supply ought at once to be procured. A safe rule is to buy enough to shade all varieties in which orange shows in the colour, although we know from interested descriptions that none of these now burns, and to have some over in case it should be deemed wise to protect scarlets, crimsons and other shades susceptible to injury by the sun.

Boxes for Packing.—These are another commodity with which the exhibitor must make absolutely certain that he is fully equipped. Old hands in the show arena know, often from painful and expensive personal experience, how dangerous it is to rest content in the idea that any boxes will answer the purpose, and that there must be plenty lying about the place ready to be picked up the second they are wanted. The man who desires or determines to be on the safe side will turn out all the boxes that can be found, put on one side those that are in suitable condition and have properly-fitting lids, and throw the remainder away

or use them for some other purpose. Then the selected ones will be again looked over, even more carefully than before, and, doubtful starters, will be instantly discarded and consideration given as to whether those which remain will answer all the demands that may be made upon them; if not, an additional supply will be bought at once.

Name Cards.—It is the rule at most exhibitions, though it is all too common to see it honoured in the breach rather than in the observance, to say that all varieties shall be correctly labelled. It is the proper thing, and if it were made compulsory at all shows, irrespective of what the produce might happen to be, the educational value of such gatherings would immediately increase by more than fifty per cent. Sweet Pea exhibitors are not, generally speaking, as great sinners of omission as many others in this respect; but even among them there is room for improvement. In classes provided by seed merchants, cards already printed are gladly supplied free of charge by the vendors of the seeds; but in other instances plain white cards ought to be in stock for use as required. The varieties selected for a special show will have their names inscribed neatly and legibly on the cards, and a few spare ones will be taken with the reserve bunches in case an alteration is deemed wise at the last moment.

Surface Cultivation.—There is no more important detail in Sweet Pea culture than this, and I would impress upon my inexperienced readers the desirability of running the hoe through the surface of the soil between the lines at every opportunity which presents itself when the ground is dry. Keep on a covering of dust 1 inch or 2 inches in depth and it will prevent waste of food, and therefore act in some degree as well as a mulching of manure. Near the plants, if one is shy of hoeing, prick over with a small fork mounted on a long shaft.

HORACE J. WRIGHT.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

Early-Flowering Border Varieties.—The value of these, both for border embellishment and the supply of cut flowers, is very great. Their flowers develop in the open air, there is no need of glass-houses for their accommodation, and so amateurs find them of much use. As the majority of the sorts are dwarf-growing and of sturdy habit, there is not much trouble entailed through staking. In rather poor or sandy soil Chrysanthemums do very well if grown in partial shade. The stems are drawn up a little more, it is true, but they retain nice green leaves and the flowers are richer in colour than is the case when the plants are grown in such soil in the scorching sunshine. So amateurs in town and suburban gardens should not hesitate to grow a few plants.

Planting Out.—If the plants are to be grown in different positions in a herbaceous border, it would be advisable to plant them in groups of three, five, seven, or even a dozen. On no account must they be overcrowded, and the groups should be composed of distinct varieties, one in each. The soil should be dug deeply and made moderately rich with rotted manure. If worked while in a fairly dry state, the soil should be made firm again before the plants are put in; then the shoots made will be strong, mature and bear flowers freely. The best effect is obtained when

feed the plants judiciously. Give them weak doses of liquid manure at every alternate watering and a pinch of some approved chemical manure to each pot. If the swelling of the stem is arrested, the sap-vessels are much contracted and they never really become normal again, so that the flowers do not attain that large size which characterises those on plants grown without check right through the season. The final potting of the plants intended for exhibition and greenhouse or conservatory embellishment must be done without delay. Late potting often results in the

wholesale damping of the flowers in the autumn. As there is not time for the roots to well fill the pots before the buds are "taken" and feeding commences, the result is damping of the flowers through the soil getting into a bad, sour state inimical to healthy root-action. Two plants may be placed in an 11½-inch pot, one plant of a strong-growing variety in a 9½-inch pot, and one plant of a weaker-growing variety in an 8½-inch one. Plants rooted in April and grown on single stems confined to bearing one flower for exhibition or grouping purposes should be finally potted in 7½-inch pots. These plants require very careful cultivation. They must not be allowed to become pot-bound, but placed in their flowering pots by the end of June at the latest. If any varieties have not made natural breaks by June 20, the plants must be stopped then, and only early-flowering sorts will bear fine blooms from such late breaks. AVON.

THE GREENHOUSE

A NEW HYBRID REHMANNIA.

(R. KEWENSIS.)

HYBRIDISING, it has been said, is "a game of chance played between man and plants," and it certainly appears to

have been the element of chance that induced the hybridist to cross two very ordinary-looking plants such as *R. Henryii* and *R. chinensis*. These two species are the parents of the new hybrid. *R. Henryii* is a comparatively recent introduction from China, a dwarf-growing plant with dingy,

whitish yellow flowers. *R. chinensis* is perhaps better known as *R. glutinosa*, and is very little improvement, so far as appearances go, upon the other parent. The hybrid, however, shows a very decided advance over both parents. Its upright habit, branching from the base, is clearly portrayed in the accompanying illustration, while its large Foxglove-like flowers at once attract attention. The colour is creamy white or very pale yellow, each flower having a conspicuous crimson-maroon blotch on the upper segments. This hybrid has been raised at Kew, and for greenhouse or conservatory decoration it is likely to prove an acquisition.



REHMANNIA KEWENSIS, A NEW HYBRID PLANT FOR THE GREENHOUSE.

only a few varieties, about six, or at the most nine, are grown in a border. The effect is much better than when single or isolated plants are put in representing many varieties.

Feeding and the Final Potting.—I know it is a fact that some cultivators are afraid to feed a Chrysanthemum plant before it has filled the pot with roots after the final potting or before it has had its bud "taken." It is not always convenient, however, to pot the plants just when they need it, and if this work be put off at all unduly, the growth of the plants will be retarded. Now, instead of allowing this to happen, the cultivator should

GARDENING FOR BEGINNERS.

CURRENT WORK AMONG THE RHODODENDRONS.

RHODODENDRONS are flowering with remarkable freedom this year, and before long their glory will have departed. Those who care for the future well-being of their plants should not omit to remove all the trusses of dead and dying flowers, and thus prevent them from seeding, for it should be borne in mind that the production of seed is a strain upon the plants. The observant man knows that Rhododendrons flower far more freely the following year if the undeveloped seed-pods are all picked off.

Colour-Schemes.—No plants lend themselves to colour-schemes so well as the Rhododendrons, and during the flowering season one should make a note of those varieties in which the colours enter into perfect harmony. Unfortunately, one too often meets with the common purplish Rhododendron ponticum, whose one great attribute lies in the fact that it is the only shrub never injured by hares and rabbits. It undoubtedly is a capital covert plant, growing well under trees, thriving in almost any soil and situation, and transplanting with perfect freedom; but why it should be so perpetually given a prominent place in ninety-nine gardens out of every hundred where Rhododendrons thrive it is hard to imagine, seeing that we have a host of varieties of pleasing hues to select from. The variety Pink Pearl is, beyond doubt, one of the most beautiful in cultivation, although it has been a little irregular in flowering; at all events, in suburban gardens. Kate Waterer is a rosy crimson variety with a large yellow mark; it always comes in for a fair share of admiration and never fails to flower well, while Smithii album, a clear white, heavily spotted, is, in the writer's opinion, the best white in cultivation. Other good varieties are Alice (rose pink), Boule de Neige (white), Cynthia (rosy crimson), Doncaster (bright red) and Grand Arab (a dazzling crimson). The varieties referred to are all admirably adapted for beds on lawns or borders to carriage drives.

Soil.—There exists a general opinion that Rhododendrons will only thrive in a rich peaty soil. In actual practice, however, it is found that they may be grown successfully without peat, providing a good loam may be had. The top spit of an old pasture which is fibrous and loamy, together with leaf-mould and well-decayed manure or dried cow-manure, makes an excellent compost for Rhododendrons. It should always be borne in mind, however, that a coarse, fibrous soil is greatly to be preferred to a fine one. The dislike that Rhododendrons have for lime is quite well known, and I know of isolated cases where these plants have failed even though a peaty loam had been imported. Such failures are probably due to the presence of too much lime in the water.

Although spring is the best time to carry out the work of transplanting, there are few shrubs that withstand it so well at any season, providing a good ball of soil is removed with each plant and all reasonable care is taken to protect the delicate fibrous roots from undue injury. Watering should be well attended to after planting, and the work carried out with all possible haste. Pruning is not, as a rule, necessary for Rhododendrons, although, if required to keep the plants within bounds, the knife may be used at this season. Its smooth, shiny leaves render the Rhododendron a first-rate subject for town gardens, for smooth leaves are less liable to injury from deposits of

leaf-soil, one quarter; rotted manure and coarse sand, one quarter.

The plants may be flowered in pots of various sizes, those 5 inches, 6½ inches and 7½ inches in diameter being the most useful. In some cases the seeds may be sown in the pots, the resultant seedlings thinned out in due course, and the plants retained left undisturbed in the pots to flower. This is a desirable way of treating the annuals raised late in the season to form a succession to those that flower during June, July and the early part of August. The seedlings forming the first batches of plants must be transplanted from pans or boxes, or even the open borders, while they are small, and



RHODODENDRONS ARE GOOD FLOWERING SHRUBS FOR BEGINNERS IN GARDENING, EXCEPT WHERE THE SOIL CONTAINS MUCH LIME.

soot in a smoke-laden atmosphere than are those of a soft, downy texture. SPARTAN.

ANNUALS IN FLOWER-POTS.

MANY persons who are quite used to the cultivation of annuals in the open borders may think it is a very easy matter to grow them as well, or better, in pots. If every attention be paid to their requirements just at the right time, exceedingly fine displays of flowers may be so grown; but if neglected at all, the plants will be weedy and very unsatisfactory. There is one point that I would like to refer to at once, namely, the unsatisfactory results which follow the transplanting of annuals when they are rather forward in growth.

Ordinary soil, taken from the garden borders, will not do for our purpose. A good compost is essential, and the following may be easily procured: Turfy loam, with the fibre plentiful in it, one half;

be grown on quickly; that is, before they become at all pot-bound they should be repotted.

If the loam is of a light nature, fairly firm potting is advisable; if somewhat clayey, pot less firmly. The newly transplanted, or repotted, plants must never be allowed to droop through full exposure to the sun. At first, until they are somewhat established, shade the plants a little; a frame with a north aspect is an ideal place for them. Clear water only must be given until the flower-buds form; then judicious feeding will do much good. These pot plants are very useful for growing in yards, porches and cool conservatories.

Sweet Peas, of course, must head the list. Asters, Stocks, Zinnias, Salpiglossis, Marigolds, Godetias, Nasturtiums, Mignonette, annual Chrysanthemums, Clarkias, Candytuft, Sweet Sultan, Phlox Drummondii, the Ice Plant, Poppies in variety and Calliopsis are all beautiful. B.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Lapagerias.—To encourage these greenhouse climbers to make a good growth, syringe frequently and keep the roots well supplied with water. Attend to the regulating and tying of the growths, and guard against attacks from slugs. Established plants will benefit by an occasional soaking with properly-diluted farmyard manure. Keep a sharp look-out for thrips, which soon cripple the foliage.

Humea elegans.—Make a sowing now for producing good specimens to flower next summer. Sow the seed thinly in a well-drained pot or pan in a finely-sifted, sandy compost, and place in a warm greenhouse till germinated.

Tuberous-rooted Begonias.—Keep the plants well supplied with water, and occasional applications of liquid manure will be beneficial. Carefully stake the flowers with neat green sticks, and shade from bright sunshine.

Crotons.—To encourage a free growth and impart that fine colouring to the foliage, the plants need the maximum amount of sun. Now that the plants are rooting freely, more water will be necessary, and some stimulant should be afforded. Keep the growths well syringed and the surroundings thoroughly moist. Have the plants as near to the glass as possible.

Chrysanthemums.—For those who grow large blooms and do not wish to be bothered with the timing and stopping of the buds, an excellent method whereby one can ensure having them, and also a succession of flowers, is to cut the plants down almost to the ground-level the first week in June, either before or after the final potting, and allow three or four breaks to come away, taking the first bud made. This method also ensures dwarfier plants, and is to be preferred for small houses.

The Flower Garden.

Sub-tropical Bedding.—To obtain the best effects, the ground should be well worked and heavily enriched with rotten manure, choosing a sheltered portion of the garden. Stake the plants and secure them with good, strong strands of raffia to prevent injury from wind. In the event of dry weather, give the plants copious supplies of water at the roots, and damp overhead in the evening when the weather is warm.

Aquilegias.—For cutting purposes the long-spurred hybrids in their various shades of colour are indispensable. A sowing may now be made in a shady border for producing plants for next season's flowering.

The Kitchen Garden.

Asparagus.—Cutting from the permanent beds should cease from the middle to the end of the month, otherwise the crop for another season will be impaired. Keep the beds free from weed growth, and during showery weather dust with soot at intervals; this will be found effective against the ravages of the Asparagus beetle.

Broad Beans.—Another sowing may be made out of doors. Earlier sowings are now growing freely, and a stout stake or two driven into the ground at intervals with a string attached will be found good support. The earliest crop should be stopped when sufficient Beans are set; this will cause them to mature quicker, and is also the means of destroying the aphid which invariably attacks the points.

Marrows.—Give air freely to plants in frames when the weather is warm. Keep the flowers fertilised, and see that the plants do not suffer for the want of water. Keep the growths pegged down, and damp over twice a day.

Coleworts.—Make a sowing of these for following the summer Cabbages.

Cauliflowers.—Continue to plant out for succession those sown during the month of April. Thoroughly well water them in, and place a mulch of manure round those that were planted earlier. The earliest plantings should have the leaves tied up to preserve the flowers.

Endive.—The present month is a good time to make a sowing, where space permits, of a row, such

as between the Celery trenches. Thin out the plants when large enough to a foot apart.

Hardy Fruit Garden.

Cherries.—Encourage the fruits to swell by soakings of water at the root, together with the protection of a mulch. Keep the foliage clean by frequent syringings, and if aphid is very troublesome, use an insecticide properly diluted. The longest of the shoots and those required for extension should be tied in, and others pinched back.

Strawberries.—Immediately the earliest batch commences to colour, some protection must be given from the birds by stretching hexagonal-meshed netting over some supports on the bed.

Figs.—The earliest fruits will now be swelling fast, and where possible give the trees a good soaking with liquid manure-water. Tie up the longest of the growths or nail them in.

Fruits Under Glass.

Madresfield Court Grapes.—To colour these to perfection, allow plenty of foliage to mature over the berries to afford a natural shade. This variety in particular is very prone to splitting of the berries, and to avoid this give a good circulation of air whenever possible. Leave a little on at the top ventilators all night, or else air very early in the morning. Watering at the root should be discontinued when the berries commence to colour.

Late Grapes.—The thinning of such varieties as Gros Colmar and Gros Maroc must be more severely done, as was necessary with the earlier varieties. Attend to the watering of the borders and apply stimulants in variety, well washing them down. More air will now be needed and the shutting up of the house may be left till later. On warm nights the top ventilators may be reopened a little. This will be extremely beneficial to the foliage. If not already done, the borders should be mulched with rotten manure. This not only conserves the moisture, but does much to check attacks of red spider. Damp down the paths late in the evening, especially when near to the hot-water pipes. If any sign of mildew is noticed, smear the pipes with sulphur mixed to the consistency of paint and make them thoroughly warm.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit-Houses.

Melons.—Seeds for a late crop should be sown now, one seed in a 3-inch pot, from which the seedlings may be transplanted into the fruiting border.

Figs.—The early crop, as soon as it has been gathered, should be followed by means to induce the production of a second without loss of time. Generally, a dressing of manure to the border for old trees, a drenching with water and less ventilation will be all that is necessary.

Pot Trees.—Rich surface dressings with abundant supplies of very dilute manure-water are essential to the production of fine fruit. Liberal ventilation affects the trees beneficially in many ways, and is one of the best means of keeping them immune from insects.

Strawberries.—Runners cannot be had too early, and, if not all, at least some will now be large enough to layer. It saves much labour if the layers are brought together out of so many of the interspaces and layered either in small pots, pieces of turf, or prepared soil. None of the plants is in this way overlooked when watering, which is more expeditiously performed when the plants are grouped, and weeding and other necessary work is more easily attended to.

The Fruit Garden.

Apples.—If trees trained to espaliers have not yet been disbudded, they should be seen to without further delay. As a rule, they should not be pinched, which only induces the production of more unnecessary growths, but be broken clean off, and thus give abundant space for the foliage on the spurs left to expand.

Pears.—Some trees have set enormous crops, and these are now in fit condition to thin. Small-fruited varieties, such as Winter Nelis and Bergamotte Esperen, should be much reduced in numbers, the larger fruits of these being always better flavoured.

Netting Fruit.—The early ripening of Strawberries which are very forward calls for means of protection, which for these and all other fruits should be securely placed over the fruits before they are ripe enough to tempt birds. Once these get a taste of the fruit, it is barely possible by ordinary means to keep them out.

Training.—Young trees of all kinds, but more particularly of Peaches and Plums, will need constant attention to keep the young shoots neatly nailed to the walls. Any lateral growths should be pinched while still very small. Grape Vines which do not, as a rule, fruit also need the shoots fastened loosely, or else pinched in those instances in which they are not wanted to cover walls.

The Vegetable Garden.

Coleworts.—Sow seed of London Coleworts for a full crop. They will be ready to use in mid-winter.

Late Peas.—During the incoming week make a large sowing for latest gatherings, which sometimes extend into November. The Queen and The Gladstone are two very reliable varieties, being little susceptible to mildew. Proceed as recommended for the last sowing. By no means use many seeds, and allow abundant space between the rows.

Potatoes.—When lifting the earlies, note the best plants and select the tubers from these for seed for another year. It is usual to allow the tubers to lie in the open to "green" before storing them, but they may be stored at once in an airy room where they will be isolated from disease should it attack living plants.

Vegetable Marrows.—Strong plants in 4-inch pots, planted in vacant spaces and started by means of abundance of water at the root, will grow very rapidly and produce nice Marrows for use in autumn. It is best to limit the number of shoots, three or four at the most being sufficient. Cut when young. Large, overgrown Marrows are a great drain on the energies of the plants, and for eating are of no great value.

The Flower Garden.

Tidying Up.—It not infrequently happens that routine work is neglected at this period, but it should be overtaken at once now that the fiercest of the battle with bedding plants is over.

Dwarf Plants.—The mossy Saxifrages, evergreen Candytufts, Aubrietias and dwarf Phloxes are examples of plants which it is desirable to keep neat throughout the summer months. This is best attained by means of a pair of hedge or sheep shears, the old flower-heads and straggling growths being neatly trimmed. New growth springs at once, and it is an aid to the plants to sprinkle some finely-sifted compost over them, which the first shower of rain washes down. The neat, grey-leaved Cerastium needs to be repeatedly trimmed in the same way, by which means it produces a succession of new shoots all through the summer months.

The Plant-Houses.

Pits, &c.—There are always a few structures emptied at this season, when the opportunity should be taken to clean them thoroughly, burning sulphur to destroy with its fumes any insects that may be alive.

Zonal Pelargoniums.—Those in 4-inch pots should now be at the proper stage to repot into 6-inch ones for flowering in winter. They are best stood out of doors on a cinder-bed till September. A few of last season's plants shaken out and also repotted into 6-inch pots bloom more profusely and earlier than young plants; otherwise the treatment is identical.

Arum Lilies.—There need be no further delay in planting these into a quarter of the kitchen garden to pass the summer. If increase of stock is wanted, small pieces taken off the larger plants and set singly will furnish nice material to flower in 6-inch pots. The plants otherwise, once they are deeply planted, require no further attention till the time for repotting arrives.

R. P. BROTHERSTON.

Tynningham, Prestonkirk, N.B.

DAFFODIL NOTES.

SOME GOOD, CHEAP VARIETIES FOR SHOW.—
BRECON MEMORIES.

ACCORDING to my promise in my notes of May 18, I now submit a list of a few good, cheap varieties for show. Everyone feels a little flattered when his advice has been followed, and pardonably so, I hope, when it has led to good results. So, just as a dealer prefaces his catalogue with an account of the medals and prizes he has won, in order to show the goodness of his wares, may I be allowed to refer to the success of my friend, Mr. A. C. Carne Ross of Brecon, at the Brecon show this year. Brecon to me is an ideal local Daffodil show. To begin with, they have got the right people at the head of affairs—Lord Glanusk, who “works like a horse,” and Miss A. de Winton, who is energy personified. Then such competitors! all “as keen as mustard”!—Captain Kitchin and Mr. Carne Ross, among others. I was afraid the exigencies of soldiering would lose us the former, but the powerful magnet of the garden has drawn him from the Service, and a hard-to-beat man has been saved. Mr. Ross is a typical plodder, who is year by year, with careful discrimination, building up a collection of good, reliable sorts which are just the thing for shows. He did very well indeed this year, and he has already asked my advice with regard to additions for 1913. I hope what I have suggested will be found to have been helpful; ditto, when what follows is read. Cornelia, Monarch, Mrs. H. J. Veitch, Mervyn and King Alfred are all excellent yellow trumpets that, when shown in good form, take some beating. Among bicolors there are Duke of Bedford, Coronet, Cygnet, Dorothy Kingsmill and Waxwing. In the white trumpets Mme. de Graaff is indispensable; Treasure Trove and Princess are certainly the pick of the bunch of the rather expensive sort. The former may be had for half-a-sovereign, and the latter for half-a-crown more. Both are good, refined flowers with flat, symmetrical perianths, broad and overlapping segments and shapely trumpets.

Coming to Division II. (incomparabilis), in section (a), with yellow perianths, Blackwell cannot be too highly recommended, and the same may be said of Homespun. This last-named variety is a soft yellow self, to which the words “of perfect form” may truthfully be applied to all well-grown specimens. Solfatare is certainly one to go for. Apart from its great merit as an extraordinary lasting garden plant, the pale colouring of its Nelsonii-like cup and its large imbricated, but yet rather loosely-built, perianth give it a very distinct character. The splendid old red-cupped Gloria Mundi, it must be remembered, is still one of the best. Among the white perianths, I put Whitewell as an outstanding flower of the highest merit, “altho’ I says it as shouldn’t,” it being my own introduction. This last season it must have been seen at almost every Daffodil show in the kingdom, and it invariably held its own, although the dry and hot summer of 1911 did not suit it very well. Brigadier, a pointed Lady Margaret Boscawen, is a variety of great merit, and not so well known as it should be. “A good ‘two-bob’ flower” is my comment. The bicolor Steadfast is one of the late varieties that the present curious season has brought into prominence. It is a true florists’ flower, and very satisfying to the “con-noise-er.”

The new Barri division (No. 3) is a large one, and selection is difficult. Perhaps among the yellow perianths Coreen, Castile, Cœur de Lion and Occident, and among the white perianths Circlet, Incognita (especially if you could buy a bit of the Lissadell climate with it), Ethelbert and Sunrise, are the ones I would be going on with until the longingly wished-for time of Challenger, Queen of Hearts and Sheba, being mine, should come.

In the 1910 arrangement of classes all the Leedsii are put together. I regret it, as it is a division of many types, and I fear, looking at the present trend of judging practice, that some of the most beautiful forms will drop out. We want Countess of Southesk type, and we want Empire type, and we want Venus type. I hardly know what to advise, but no one can be wrong in acquiring Evangeline (a pale bicolor Homespun), Pilgrim and Countess of Southesk (two Frank Miles sorts of Leedsii), Diana (it was good with me this year) and Eoster, with a few bulbs of the indispensable White Queen.

Doubles and bunch-flowered kinds, as also triandrus and Jonquil hybrids, I must let severely alone. This leaves me with only the Poets, and what to say about them I do not quite know. They all seem to have such a liking for poor Edward Terry that they will go in for copying his neck. The worst of it is, they always seem to take a special delight in showing off their mimicry just when you do not want them to. Well! readers, all we can do is to humour them, and take them at their own time, and tell them if they will only do as we want them for a short time when we are showing them to our visitors, they can play at Edward Terry necks ever afterwards. Cassandra, Virgil, Homer, Horace, Laureate, Matthew Arnold and George Herbert are among the best behaved, but the choice is so great and the differences so small that I hesitate to advise.

Of one thing I am certain: early planting is the golden key that unlocks the prizes in the following spring.

JOSEPH JACOB.

LEGAL POINT.

Notice to Quit (Joycey).—If a tenant holding under a three years’ agreement remains in possession after the expiration of the term, paying rent quarterly, he becomes, apart from express agreement to the contrary, a tenant from year to year. Such tenancy can be terminated by the customary half-year’s notice given for the end of the current year of the tenancy, *i.e.*, it must be given for a date corresponding with that on which the tenancy commenced. If the tenancy did not commence on one of the customary feast days, the notice must not be less than 182 days. If the tenancy commenced on Lady Day, the notice must be given on or before Michaelmas Day. Of course, this is all liable to be modified by the express stipulation of the parties; by express contract they may do what they please. In case of an agricultural holding, apart from contract to the contrary, a year’s notice must be given. A tenant who only intends to stay for a year should decline to sign an agreement whereby the premises are demised “for one year and so on from year to year,” as such tenancy would endure for two years. The landlord is right in his contention put by the queriest, and a fresh notice, given on or before Michaelmas Day for March 25, is necessary, unless the landlord can be induced to accept a surrender at an earlier date.

BARRISTER.

ANSWERS
TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the “Answers to Correspondents” columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

NARCISSUS GROWING WILD (B. A. I.).—The flowers were rather faded; but we have very little doubt but that it is *N. biflorus*, which is found wild in certain parts of Britain.

CENTAUREA ATTACKED BY FUNGUS (J. P.).—The Centaurea is attacked by the rust fungus (*Puccinia suaveolens*). The same fungus attacks Thistles, and usually prevents them flowering. We fear that, when once attacked, nothing can be done to cure the plants. We recommend you to root out the worst attacked, and to spray the rest with a rose-red solution of potassium permanganate.

WHITE-FLOWERED BEDDING PLANT (Wulfruna).—If needs be you might reduce the grossness of growth of the Marguerite by plunging the plants in pots instead of planting them out. In this case, however, they would require more attention in the watering. Other suitable subjects would include white Petunia, white tuberous-rooted Begonias and white Phlox Drummondii, all of which are free and profuse flowering.

LILIES FAILING (L. J.).—It is difficult to account for such wholesale failure as that you describe unless you put it down to the heat and drought of last year, and these, exceptional as they are, can hardly be held absolutely responsible for the wholesale failure of long-established clumps, though they might have much reduced their strength. You do not say whether you have examined the positions where the complete failure has occurred to discover the present condition of the bulbs. This might have shed some useful light in the circumstances. Occasionally, when the bulbs have long remained in one place, they sicken and become a prey to root fungus; though of personal knowledge we know of fine clumps in your county that have done well for many years without much care. The sharp spell of frost in the early spring of this year could not have injured the plants unless growth was forward, and that evidence would have been before you. In the circumstances we can only advise you to examine the positions where the bulbs have been and glean all possible information. Had the bulbs given a prodigious flowering last year, that, with the heat, might have been held responsible, as collapse frequently follows. When you have made an examination, write us again.

TREATMENT OF EREMURI (J. S. E.).—If the bed was only made and planted in January last, the plants will require well looking after to prevent disappointment ensuing next year. The planting was done much too late, and early October—the season when, under normal conditions, root action is set up anew—would have been far better. Because of this late planting the current growth may suffer, though that would be governed by local conditions and the method of planting. Hence for the moment encourage the best possible development of the plants, affording them water or liquid manure occasionally if dry weather is experienced, in addition to a mulching of manure. The Eremuri do not root deeply or numerously, but send out thong-like roots which radiate horizontally from a common centre, after the manner of the spokes of a cart-wheel. In two or three years such roots may be found 3 feet or even 4 feet from the crown of the plant, and often not more than 6 inches or 8 inches below ground; hence the soil should not be much or deeply disturbed within these limits. A light pricking over of the surface and a mulching of half soil, half manure, would be helpful to more established plants than yours. In winter, mulch the plants well with litter or the young leaves of Bracken. Nearly all the Eremuri suffer from the keen winds and frosts of spring; hence a position sheltered from the north and east is desirable, the shelter of a shrub-belt being the best of all. Do not allow the plants to ripen seeds this year; it will only tend to weaken them.

TREES AND SHRUBS.

“YELLOW” WISTARIA (J. C. K.).—The mention of yellow-flowered Wistaria to which you allude was probably made by a reporter who did not possess a very good horticultural knowledge. We have not heard of a kind bearing yellow flowers, and it is probable that the Laburnum flowers were mistaken for Wistaria.

VALUE OF TIMBER (Gardener).—It is not possible to give any hard-and-fast price for timber, as the price of the same kind and quality of wood differs considerably in different parts of the country, and even within a few miles. Several pence per cubic foot more may be obtained for wood within an easy distance of a station or waterway than for that which is in a position several miles away from a station. Good average Oak may sell for anything between 1s. 6d. and 2s. 3d. a cubic foot. Scots Fir, if of good quality, rarely sells for more than 6d. a cubic foot in the South of England. Spruce sells for the same price; Larch from 1s. to 1s. 2d. a cubic foot; Poplar, 6d. to 10d.; and Beech, 9d. to 1s. 6d. Rough trees have to be sold for less money.

FRUIT GARDEN.

MAIDEN APPLE TREES (E. S. K.).—We should certainly take off the flowers. It would cripple the young trees' growth for many years to allow them to carry fruit as maidens.

VINE LEAVES WITHERED (A. S.).—The leaf sent is perfectly healthy; but being young as yet, it is, of course, tender. The cause of the edges turning slightly up, we think, is the recent great heat and too close an atmosphere in the house. Ventilate more freely while the weather is so hot, and thus keep down the temperature; and, of course, you will see that the Vines do not suffer from the want of water at the roots. Before the next watering is done, give the border a fair sprinkling of lime, forking it in about two inches deep, and then water. For green fly, vaporise with XL All, half the strength recommended for red spider and thrip. This will bring the fly down and will not hurt the Vines.

MISCELLANEOUS.

NAMES OF PLANTS.—*E. M. Parkstone.*—*Muscari comosum plumosum.*—*E. H. W.*—*Valeriana Phu* (the Cretan Spikenard).—*E. B., Wigan.*—1, *Pyrus Aria*; 2, *Acer Pseudo-platanus.*—*E. S., Bucks.*—*Pyrus lobata.*—*F. U., Westerham.*—*Veronica gentianoides.*—*F. Lurani.*—The Rose had dropped all its petals and was past recognition.—*E. W., Devon.*—1, *Spiraea japonica variegata*; 2, *S. japonica*; 3, *S. tomentosa*; 4, *S. arguta*; 5, *S. species*; 6, *S. Van Houttei.*—*W. J. B.*—1, *Muscari comosum plumosum*; 2, *Olearia gunniana*; 3, *Scilla peruviana.*—*E. F. C., Hants.*—*Rosa hispida.*—*E. G., near Lewes.*—*Phlomis fruticosa.*—*C. B.*—*Fabiana imbricata.*—*H. T.*—1, *Ceanothus dentatus*; 2, *Iris sibirica orientalis*; 3, *Thalictrum aquilegifolium*; 4, *Diervilla rosea*; 5, *Iaula glandulosa*; 6, *Achillea Kellereri*; 7, *A. tomentosa*; 8, *Lychnis Viscaria flore pleno*; 9, *Geum intermedium*; 10, *G. chilense* variety; 11, *Berberis species*; 12, *Silene species*, specimen too scrappy to identify. The others are garden seedling forms of *Heuchera*.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

UNQUESTIONABLY the chief feature of the fortnightly exhibition held on June 4 was the magnificent display of Sweet Peas staged by Messrs. Dobbie and Co., while a gorgeous bank of Orchids from Lieutenant-Colonel Sir George Holford's garden served as a further proof, if such were needed, of the admirable way in which these gems of the floral world are grown at Westonbirt. Hardy plants, Roses and greenhouse flowers were alike well represented at the hall on this occasion; the tall spikes of Delphiniums and Eremuri, together with showy Poppies in their Oriental magnificence, were the admiration of all.

FLORAL COMMITTEE.

Present: Mr. H. B. May (chairman), and Messrs. C. T. Drury, W. B. Cranfield, W. J. Bean, J. W. Barr, G. Reuthe, C. Blick, W. Howe, C. R. Fielder, J. Jennings, R. C. Reginald Neville, G. Gordon, A. Turner, C. Dixon, W. Cuthbertson, J. T. Bennett-Poe, Charles E. Shea, C. E. Pearson, W. T. Ware, W. P. Thomson, E. H. Jenkins, W. J. James, G. Paul, J. Hudson, F. Page-Roberts and R. Hooper Pearson.

Messrs. G. Bunyard and Co., Maidstone, arranged a particularly good table of herbaceous subjects, which included Pyrethrums, Pæonies, Spanish Irises, Heucheras, Poppies and other good and showy plants. The Poppies and Pæonies made a particularly fine bank of colour, and lightened by the other flowers named made up an exceedingly attractive whole.

Mrs. E. Lloyd Edwards, Bryn Oerog, near Llangollen, showed baskets of hybrid Heucheras in charming variety, such as Queen Mary (scarlet), Princess Mary (pink), Liberty (scarlet, small-flowered) and Edge Hybrid Improved (a pink-flowered form) being among the best. H. Queen of Roses is also a charming flower.

Mr. G. Reuthe, Keston, Kent, displayed a small group of hardy things, in which were seen *Orchises*, *Coronilla montana*, *Calochortus pulchellus*, *Campanula Stevenii*, *Silene Hookeri*, *Lewisia Howellii* and other good and useful plants. *Viola bosniaca* in this group was a very charming plant.

Mr. E. J. Hicks, Hurst, Berks, had a display of rambler and other Roses, the more attractive being Trier, the yellow *Harrisonii*, *Soleil d'Or*, and Sarah Bernhardt, the latter of rich crimson shade.

Messrs. James Veitch and Sons, Limited, Chelsea, showed a delightful series of *Nemesias*, of which Blue Gem, White Gem and Orange Prince were among the more noticeable.

Messrs. Kelway and Son, Langport, had a display of single and double flowered Pæonies with occasional groups of Delphiniums. Among Pæonies, Heart's Desire (pink, gold anthers), Meteor (crimson), Pride (maroon) and Tinted Venus were the best in a rather extensive exhibit of these things. *Delphinium grandiflorum plenum* was also well shown; it is a double-flowered variety, and a by no means commonplace plant.

Messrs. J. Peed and Sons, West Norwood, S.E., displayed a splendid lot of Gloxinias, mostly of named varieties, and generally of a superb, well-flowered strain. The fancy or spotted-flowered varieties were very charming, Ruth (violet), Mrs. John Hue (violet and white) and Queen Alexandra (of pinkish hue) being notable. *Streptocarpus* were also well exhibited by this firm.

Mr. Leslie Greening, Richmond, had a small corner display of rockwork associated with alpine and aquatic plants.

Messrs. Dobbie and Co., Edinburgh, staged a delightful lot of Sweet Peas, the flowers superbly grown and not less superbly displayed. It was indeed a magnificent exhibit, and one of the best; it is hardly likely to be surpassed in the present season. *Elfrida Pearson* (pink), *Melba* (salmon), *Dobbie's Scarlet*, *Afterglow*, *Mauve Queen*, *Mrs. Hugh Dickson* (pink and cream), *Thomas Stevenson* (orange scarlet) and *Dobbie's True Lavender* were a few of what might be regarded as the indispensables of a capital lot.

Messrs. Paul and Son, Cheshunt, had a rather extensive display of Pæonies and Heucheras, *Whitleyi*, of the former, pure white with golden anthers, being most conspicuous.

Messrs. Phillips and Taylor, Bracknell, Berks, showed Poppies, Pyrethrums and Water Lilies in variety.

Messrs. E. W. King and Co., Coggeshall, Essex, displayed a delightfully artistic exhibit of Sweet Peas, arches, vases and groups tending to show these flowers to the best advantage. This was a really beautiful lot most pleasingly arranged.

Messrs. F. Cant and Co., Colchester, had some lovely Roses, Una, Irish Elegance, Mme. Melanie Soupert and Paul's Carmine Pillar catching the eye at once.

The Misses Hopkins, Shepperton-on-Thames, had an interesting exhibit of hardy things, Pinks, *Onosma taurica*, *Dianthus neglectus* and *Aubrietia Lloyd Edwards* being noted in a nice lot of things.

Messrs. W. Cutbush and Sons, Highgate, N., exhibited a very taking lot of Hydrangeas in the newer varieties, Mme. E. Moulière (white) and General de Vibraye (pink) being among the more conspicuous.

Messrs. Reamsbottom and Co., Geashill, Ireland, displayed in very charming variety the St. Brigid Anemones in many shades of colour.

Messrs. Fells and Son, Hitchin, had a display of Pyrethrums and Irises.

Messrs. T. S. Ware, Limited, Feltham, brought Irises, Poppies, Eremuri, Gaillardias, Campanulas, *Iris ochroleuca*, Delphiniums, Antirrhinums and Heucheras, together with a small assortment of alpine, the whole filling a rather lengthy table. *Lewisia Cotyledon* and *Mazus Pumilio* were notable things.

Messrs. Stuart Low and Co., Enfield, staged a bright and effective group of Carnations, both as pot plants and in the cut state. Lady Alington, Baroness de Brien and Princess Juliana were all well shown, as also were some well-flowered Hydrangeas.

Mr. C. Blick, Hayes, Kent, staged some admirable border Carnations, of which King George (pure white), Attraction (pure white—award of merit), Argonaut (scarlet), Queen Mary (salmon, clove-scented), Dauntless and Thomas à Becket, both yellow fancies of splendid size, were among the best in a superb lot of flowers. Donald MacDonald, also a yellow-ground fancy, was in fine form. It is very rich in colour.

Messrs. J. Veitch and Sons, Chelsea, had a most interesting table of Cannas, Calceolarias, standard Fuchsias and Heliotropes. *Clianthus Dampieri* and *Lavatera assurgentifolia* (violet and white flowers and woolly leaves) were also noted. *Eleocharis reticulatus*, with white, deeply-fringed flowers, was most charming and very profusely flowered.

Mr. G. Ferguson, The Hollies, Weybridge, showed a table of Delphiniums, chiefly of blue and white varieties, the latter more remarkable for their numbers than their intrinsic beauty or merit.

Messrs. S. Bide and Sons, Limited, Farnham, Surrey, brought a delightful lot of Sweet Peas in some thirty or more distinct varieties.

Cannas, Irises, Fuchsias and Pelargoniums were well shown by Messrs. Cannell and Sons, Swanley, Kent. Of the Pelargoniums there were no fewer than three dozen vases in the best varieties, and displayed with this firm's well-known skill.

Messrs. Paul and Son, Cheshunt, had a table of Moss and garden Roses, of which Irish Glory, Austrian Yellow Briar, Austrian Copper, the Double Yellow Scotch and *sinica* were notable examples. Una, too, was very charmingly displayed.

Mr. L. R. Russell, Richmond, had a table of rockwork and alpine plants, arranging colonies of Sedums, *Edelweiss*, *Achillea*, *Campanula* and other suitable subjects.

Baker's, Wolverhampton, had a rich display of Lupines, Poppies in variety and *Viola cornuta purpurea*, the whole making a showy lot.

Mr. James Douglas, Great Bookham, staged some admirable Carnations of the border class, of which Elizabeth Schiffner, Mrs. G. A. Reynolds (orange buff), Agnes Sorrel (maroon) and Margaret Lennox (yellow ground with scarlet border) were very fine.

Mr. H. Burnett, Guernsey, showed a magnificent lot of Perpetual-flowering Carnations in such varieties as Scarlet Glow, R. F. Felton, White Enchantress, Marmion, Mikado, Mrs. C. F. Raphael, White Wonder and Mandarin.

Messrs. Piper, Barnes, Surrey, had a table of good hardy things, the more telling being *Primula bulleyana*, *Dianthus deltoides* Brilliant, *Polemonium flavum*, *Campanula van Houttei*, *C. pulla* and the new *Wahlenbergia gentianoides*, a pretty and graceful plant, 18 inches high, with clear pale blue bells.

Messrs. H. B. May and Sons, Edmonton, had some particularly good groups of Heliotropes, *Ixora Williamsii*, *Swainsona galegifolia*, *S. g. alba* and *Verbenas* in variety.

Messrs. Carter Page and Co., London Wall, showed Dahlias and Violas in variety.

Messrs. R. H. Bath, Limited, Wisbech, brought fine collections of Pæonies and Pyrethrums.

An exquisite collection of views of Bulgaria, exhibited by A. Delmard, Esq., for H.M. King Ferdinand, came in for general admiration. Those views particularly from the neighbourhood of Sofia and Euxinograd created a good deal of interest among the visitors. The numerous scenes depicting the wild, rugged mountains of the Balkans, together with those of the King's gardens and quaint monasteries on the mountain slopes give to the stay-at-home Britisher an idea of the conditions that prevail in this Balkan kingdom.

Mr. James Box, Lindfield, Sussex, was represented by a brilliant display of Irises, Delphiniums and Oriental Poppies.

A nice lot of Roses, including such fine things as *Rosa sinica* Anemone, Austrian Copper, William Allen Richardson, Austrian Yellow and Mme. A. Carrière, was shown by Mr. George Prince of Oxford.

Mr. Amos Perry, Hardy Plant Farm, Enfield, had a brilliant display of Oriental Poppies in various hues, also *Dictamnus caucasicus* and a number of good hardy Lilies.

A first-rate collection of greenhouse Calceolarias, well grown and of excellent colour, was shown by V. Phillips, Esq., Crofton Court, Orpington (gardener, Mr. T. Hobbs).

The new Zonal Pelargonium Champion, which received an award of merit, was shown in quantity by Mr. P. Ladds, Swanley Junction, Kent. It will be described under "New Plants" in our next issue.

Six new and rare plants, viz., *Dracocephalum bullatum*, *Wildenia candida*, *Oxalis adenophylla*, *Primula yunnanensis*, *P. membranifolia* and *P. pulchella*, were shown by Messrs. Bees, Limited, Liverpool.

Messrs. Whitelegg and Page, Chislehurst, Kent, showed Geum Mrs. Bradshaw, Delphiniums in variety and Calceolaria Cibranii in great profusion among other free-flowering plants.

ORCHID COMMITTEE.

Present: Sir Harry J. Veitch (chairman), and Messrs. Gurney Wilson, R. G. Thwaites, F. Sander, F. J. Hanbury, A. McBean, W. Cobb, J. Cypher, W. H. Hatcher, J. E. Shill, H. G. Alexander, A. Dye, W. H. White, J. Wilson Potter, W. Bolton, de B. Crawshaw and C. J. Lucas.

Lieutenant-Colonel Sir George Holford, K.C.V.O., sent a splendid group of Orchids, among which were some well-flowered specimens of *Cattleya Warszewiczii* of good form and colour; *Lælio-Cattleya canhamiana* and *Lælia Martineetti* The Prince, which was well coloured and had four spikes carrying sixteen blooms. Miltonias were also in most excellent condition, *M. vexillaria* Empress Augusta Victoria being perfect. *Brasso-Cattleya digbyana* Mossie was also well finished and of good substance. *Oncidium divaricatum*, with two large branching spikes nearly five feet in length, made a good centre, and the white form of *Cattleya Dusseldorfei* Undine was most effective. *Odontoglossums* and *Dendrobiums* were also included. The whole group was tastefully arranged by Mr. H. G. Alexander, and secured the gold medal.

Messrs. Hassall and Co., Southgate, showed a choice collection, including the white form of *Cattleya Mendelii*, *Anguloa Clowesii* and *Dendrobium acuminatum*. Silver Banksian medal.

Messrs. J. and A. McBean, Cooksbridge, Sussex, staged a choice group, among which we noticed *Odontioda Cooksonii*, *O. Charlesworthii*, with its rich, deep-coloured flowers, and several Miltonias and *Odontoglossums*. Silver Banksian medal.

The Liverpool Orchid and Nursery Company staged *Lælio-Cattleya Cowanii*. This was a most striking flower, with rich orange and carmine shaded sepals and a deeper labellum. Other notable hybrids were *L.-C. Eudora* and *L.-C. dominiana*. Bronze Banksian medal.

Mr. A. W. Jensen, Lindfield, Hayward's Heath, staged some good flowered *Cattleyas*, *Odontoglossums* and *Cypripediums*.

H. S. Goodson, Esq., 85, West Hill, Putney, had a most interesting group of plants, consisting largely of *Odontoglossums*, *Cattleyas*, *Lælio-Cattleyas* and *Lælias*. A silver-gilt Flora medal was awarded.

Mr. H. A. Tracy, Amyand Park Road, Twickenham, staged *Dendrobiums*, *Oncidiums*, *Odontoglossums* and *Masdevallias*. A white form of *Cattleya Mossie* was noticed, also a distinct form of *C. Mendelii* of good colour. *Dendrobium Falconerii* was also well flowered.

Messrs. Stuart Low and Co., Bush Hill Park, staged an interesting group, prominent among which were *Oncidium Kramerii*, *Dendrobium densiflorum*, *Lælio-Cattleyas* *Eudora*, *Niobe* and *canhamiana*. *Dendrobium thyrsoiflorum* was also well flowered, and the pretty *Bulbophyllum Lobbii* attracted attention. Silver Banksian medal.

Messrs. Sander and Sons, St. Albans, were in their usual form and presented a most attractive exhibit. *Odontoglossum amabile* × *O. eximium* was in good form. Miltonias were well represented, and *Odontioda Bradshawii* variety *vivicans* is a most beautiful form. Silver Flora medal.

Messrs. Charlesworth and Co., Hayward's Heath, were strong in *Phalaenopsis rimestadiana* with large spikes of well-formed flowers. *Odontoglossum Illustissimum* is a most striking form and colour. *Cattleyas* and *Lælio-Cattleyas* were also good. Silver Flora medal.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

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Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Lælio-Cattleya Fascinator.—Among the numerous Orchids that flower during the month of May, the plant just quoted occupies a high position. It is of easy culture, and deserves a place in every collection where Cattleyas are grown. The sepals and petals are almost white, while the large open lip is streaked and marked with rosy purple. The parents are the two fine species *Cattleya Schröderæ* and *Lælia purpurata*.

Primula pulverulenta Mrs. R. V. Berkeley.—The type of this charming variety is one of the most popular hardy Primulas in commerce, and any variation such as we get in the old *P. japonica* will be welcomed by all hardy plantsmen. The subject of the present note appeared as a sport among a batch of *P. pulverulenta*, and it was among the best of the novelties at the recent International Show. As in the type, the flowers are borne in whorls, but they are white with a small yellowish circle at the top of the corolla tube. There will, no doubt, be a great demand for this new plant, for it is a decided acquisition to the genus.

Rheum Alexandræ.—This very distinct Rhubarb, one of the novelties of 1909-10, is proving a good and striking plant, curious, yet pretty in its way, and useful for conspicuous situations where some character is required. It derives much of its value from the yellow bracts of the flowering stems, these being quite leaf-like in character and the stems being three feet or so high; these bracts show up well in the garden. The leaves are of a dark, shining green, and the whole plant is one of decidedly novel appearance. It is perfectly hardy, and has been found to be so in several gardens into which it has found its way.

A Showy Chinese Shrub.—The showy character of *Sophora viciifolia* has resulted in its rising to a conspicuous position among flowering shrubs in a short space of time, for it is not more than a dozen years since it was received into general cultivation. It differs widely from the well-known *S. japonica*, for, whereas the latter grows into a large timber tree, the newer species is of shrubby habit. Growing at least 6 feet high in the open ground and 12 feet against a wall, it forms a shapely specimen, with rather stiff, spiny branches clothed with small, bright green, pinnate leaves. The Pea-shaped flowers are borne in short inflorescences in June; the prevailing colour is white, but there is a distinct violet tinge, due mainly to the prevalence of that colour in the calyx. It may be propagated by means of seeds, which ripen freely, or by cuttings

inserted in sandy soil in a cold frame in July or August. Any ordinary garden soil suits it, that of a loamy character being the best. As large plants transplant badly, it should be placed in a permanent position while quite small.

An Effective Garden Poppy.—One of the prettiest of all annual or biennial Poppies is *Papaver umbrosum*, which is most effective among grass, and a fine display was made in this way at Kew lately. Nowhere does it look so fine as with this groundwork of greenery, but it is a lovely plant for the garden, and usually reproduces itself from self-sown seeds after it has once been introduced. The best plants are from autumn-sown seeds, but, hardy as it usually is, there are springs in which all the young plants may be killed, so that it is as well to save a few seeds every year for emergencies. This is a bitter lesson learned by a cultivator, who had every young plant of *Papaver umbrosum*, of which there were hundreds, killed one untoward season. The autumn and early winter had been unusually open, and the Poppies grew until after the New Year, when severe frosts, alternating with rains, came, and the *Papaver* succumbed. It is a charming Poppy, with deep but bright crimson flowers, each with a black spot at the base of every division of the flower, and the plant grows from 1 foot to 1½ feet in height. Seeds can be sown in the open in August for next year's bloom.

The Neill Prize for Horticulture.—The council of the Royal Caledonian Horticultural Society has this year awarded the Neill Prize to Mr. John W. M'Hattie, the Edinburgh City gardener. The prize, awarded for eminent services in horticulture, is the interest of a sum of money bequeathed by the late Dr. Patrick Neill for the purpose, and it is awarded every two years. The distinguished services rendered by Mr. M'Hattie to Scottish horticulture are well known and generally recognised. Since he entered upon his present appointment at Edinburgh about eleven years ago, he has effected great improvements in the city parks and gardens. While filling private appointments he was a highly-successful exhibitor, and secured many of the highest awards from the Royal Horticultural Society, the Scottish Horticultural Association and other horticultural societies, these awards including Veitch Memorial medals, a Banksian medal and the City of Edinburgh Cup. A native of the North of Scotland, Mr. M'Hattie held with great success several important private appointments before he entered upon that at Edinburgh, such as Newbattle Abbey and Strathfieldsaye. Mr. M'Hattie takes an ardent interest in the affairs of the principal Scottish horticultural societies and renders them yeoman service, so that the award will be generally acceptable to the members and others.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

A Good Trumpet Daffodil.—Having read the note, "Exhibition *versus* Private Garden Flowers," by "An Amateur," in THE GARDEN for June 1, in which he would like to know the name of a good late yellow trumpet Daffodil, we venture to say that The Doctor, a Daffodil we saw in the Rev. Joseph Jacob's garden at Whitewell, is one of the very best of all the yellow trumpets, and it is a late flowerer, expensive now, but a good variety and very effective.—ALDERSEY AND MARSDEN JONES, *Tilston, Malpas, Cheshire.*

A Useful Early Pea.—Anyone desirous of becoming acquainted with an early, productive and profitable culinary Pea would do well to give Veitch's Acme a trial. Growing about three and a-half feet high, with a strong haulm, it is simply smothered with pods from bottom to top, filled with nine to eleven good-sized Peas. Sown this year on February 14 in the open ground, splendid pods were gathered on June 1. Grown side by side with Chelsea Gem, sown the same date and under exactly the same conditions, Acme proved eight or nine days earlier.—J. B., *Margate.*

Genista mantica.—An Italian Broom which is but seldom cultivated even among good collections of shrubs is that called *Genista mantica*. It is not considered very hardy, but I think this is a mistake, at least so far as districts with a moderate climate are concerned. Two plants of *G. mantica* have been in my garden for at least six years, and they are growing well, although one of them, which is in a very exposed position, suffers at times from sharp and severe winds in winter and never makes the headway of the other. The latter is partly sheltered by other shrubs from the north winds, and flowers well annually, giving a good supply of its pretty, small yellow flowers.—S. A.

Zonal Pelargonium Hall Caine.—I am quite in accord with your correspondent (page 290, June 8), regarding the merits of this beautiful variety, although we certainly do not see eye to eye in the matter of colour. Your correspondent speaks of it as salmon, but to me it appears to be of a beautiful soft shade of red. According to the catalogues it is cherry red. It forms a grand pot plant, but is, I think, less grown now than it was at one time, probably owing to the fact that some of the newer kinds bear their flowers in larger trusses. A peculiar feature of this variety is that it frequently pushes out a secondary truss, which continues the period of flowers. Several varieties do this occasionally, but in the case of Hall Caine it often happens. There is another variety, Phyllis, which is in many ways almost a counterpart of the preceding, but the flowers are of a pleasing shade of soft salmon cerise.—H. P.

The Rose Acacia.—When this plant is in blossom during June or early July, the remark is often expressed that "it ought to be more largely grown," for there are few shrubs blossoming at that period which are more effective; yet it never appears to become common, for there are not many public gardens where it is well represented. The Rose Acacia (*Robinia hispida*) is a native of the United States of America, where it forms a dense, thicket-like growth from suckers. The rose-coloured flowers, which are as large as those of a culinary Pea, are borne in small racemes and are very effective. Better than the type, however, is the variety *inermis*, which lacks the stiff hairs

on the branches from which the former takes its name. Unfortunately, neither plant produces seeds, and propagation has to be effected by means of root cuttings or by grafting upon the common *Robinia*. Both plants thrive in ordinary garden soil of a loamy nature.—W. D.

The Cherokee Rose (*Rosa sinica lævigata*).—This very handsome Rose is flowering grandly on a south wall this season, and it is the first time it has flowered. This Rose is most beautiful. It has single white flowers with golden stamens; the flowers are 5 inches to 6 inches across, and present a magnificent appearance set in the beautiful shining green foliage, which is evergreen. I believe this Rose is found in the South of France and Italy, but its home is in the Himalayas, where I have heard of its being seen in great beauty, but not so large as when cultivated. It is not generally hardy, therefore its place is on a warm wall. It does not harbour pests like our Roses.—W. A. C.

A New Sweet Pea.—I do not know how far hitherto that well-known Daffodil-raiser, Mr. Herbert Chapman of Rye, may have entered the lists of Sweet Pea raisers, but those, in any case, are legion. Hence it is so very much the more meritorious when, out of the legion, but one here and there is fortunate enough to raise something that is exceptionally good. I think in his new waved pure white, *Iolanthe*, he has a really fine variety. I am in receipt from him of a bunch of blooms, and the flowers are exceptionally fine, being set in fours and fives on the long, stout stems. There is a solid whiteness about the flowers that is so attractive. If Mr. Chapman has sent his variety to the Sweet Pea Society's trials, it will there have to pass through a severe ordeal, as also it will when presented at the society's show next month. Necessarily, I see that alone. I have neither Etta Dyke nor Nora Unwin here for comparison, but *Iolanthe* is a superb white, all the same.—A. D., *Kingston.*

Anemonopsis macrophylla.—It will probably be interesting and possibly useful to some to say that *Anemonopsis macrophylla* has flourished well with me here for the past seven years, after it had been equally successful in a former garden of mine a few miles away. It has been all that time in the border, in common loam, rather on the dry side, possibly, for some things, but evidently suiting the *Anemonopsis*. My plant came originally to me as a seedling sent me by the late Rev. C. Wolley-Dod from his garden at Edge Hall, and it has never looked back since then, although increasing in size but slowly. It flowers annually, giving its charming pale rose and white flowers in a fairly free manner. They remind one of small-sized blooms of some of the pink or rose varieties of *Anemone japonica*, so that one can hardly quarrel with the name of *Anemonopsis*. I have been much interested in the remarks of Mr. Reginald Farrer in his "Alpines and Bog Plants," in which he discusses this plant in a manner not calculated to inspire confidence in its ways, though his later experiences were more favourable than his first ones. Mr. Farrer tells us that it has a bad reputation in gardens, and with this I quite agree. Like me, he first saw it at Edge, and resolved that he must possess it in health. He had, it appears, many failures, but finally put it out, when a fresh lot had been received, into a "rich border of peaty loam fattened with manure." Here success finally rewarded him; and he then speaks in glowing terms of the way the *Anemonopsis* took possession of its place. But there is a suggestive addendum,

as follows: "Latest news: this tale is too rosy"! My border was composed of fresh soil from a field with the turf dug in, and no manure was given. In my former garden it grew in a plot of sandy loam, poorer even than that here. One can only speak of it as it really is here, as undoubtedly it is difficult to establish in many places; and could we arrive at some definite understanding of its requirements, we would be well rewarded, as such a beautiful and distinct plant is worth a good deal of trouble to succeed with.—S. ARNOTT, *Sunny-mead, Dumfries.*

Ceanothuses Under Glass.—At no time were hardy shrubs forced prematurely into bloom as popular for indoor decoration as they are now, while the list of subjects so treated has of late been considerably extended. Some of the *Ceanothuses* are admirably adapted for the purpose, and what is decidedly in their favour is that in their charming tone of blue they stand out quite distinct from any of their associates. They do not readily lend themselves to hard forcing in the same sense as Azaleas or Lilacs; but brought on gently under glass they may be had in flower by the end of March or early in April, when, as the lighter tints greatly prevail among forced shrubs, they are, from their distinct shade, of considerable value for grouping purposes. When intended for forcing, they are best confined altogether in pots and plunged out of doors in a sunny spot during the summer months. At that time they are greatly benefited by an occasional dose of liquid manure. Of the different kinds that may be treated in this way, *Ceanothus dentatus* and *C. veitchianus* are two of the best. Both of these may be readily propagated by means of cuttings, and plants obtained in this way flower in a comparatively small state.

A Beautiful Exhibit of a Charming Annual.—A most noteworthy exhibit at the meeting of the Royal Horticultural Society on June 4, though by no means a very extensive one, was a collection of the different forms of *Nemesia* shown by Messrs. James Veitch and Sons of Chelsea. Some of the most distinct varieties were represented by about a dozen plants of each—a good idea, as in this way the general effect could be seen to advantage and comparisons between the different forms carried out without difficulty. Particularly striking were the plants of Orange Prince (with comparatively large flowers of an intense deep orange colour), Blue Gem (a charming form with flowers at a little distance suggestive of the Forget-me-not), White Gem (a pure white counterpart of the preceding), and bicolor (in which the upper part of the flower is light blue with a white lip). Under the name of Yellow Gem the plants shown were less uniform in colour than the two other Gems previously mentioned, but all were extremely pretty. Among the mixed colours, some of the scarlets and carmines stood out most conspicuously, though all were so beautiful as to render a selection a difficult matter. What is more, in viewing such masses of flower it was hard to understand that each consisted of but a single plant, as a close examination revealed. The plants, which were grown in the orthodox $4\frac{1}{2}$ -inch pot, or one 5 inches in diameter, had been stopped twice during their earlier stages in order to induce a bushy habit of growth, which treatment was conclusively proved to be most satisfactory. At all events, the charming selection of varieties and the high state of culture manifest in the condition of the plants were both worthy of record.—H. P.

A Seedling Loquat.—When passing through Italy a few years ago, I purchased some of the fruit of the Loquat, *Eriobotrya japonica*, at that time in season. The plant with its fruit shown in the illustration, the offspring of one of the seeds of such fruit reared in a cool greenhouse, may be of interest to some of your readers.—(Miss) E. R. TAYLOR, *Old Charlton*.

Cineraria Matador.—Those who have grown this beautiful *Cineraria* will be able to endorse every word that has been written in its favour on page 189, April 20 issue. For decorative purposes where a mass of colour is wanted the scarlet *Cineraria* has few equals. The variety can be relied on to come true; out of a batch of about seventy plants there were only two or three not up to the standard. Although introduced under the above name, I believe the same thing is offered as *New Scarlet*; at any rate, there is little or no difference in the colour of the flowers.—H. S. WARGRAVE.

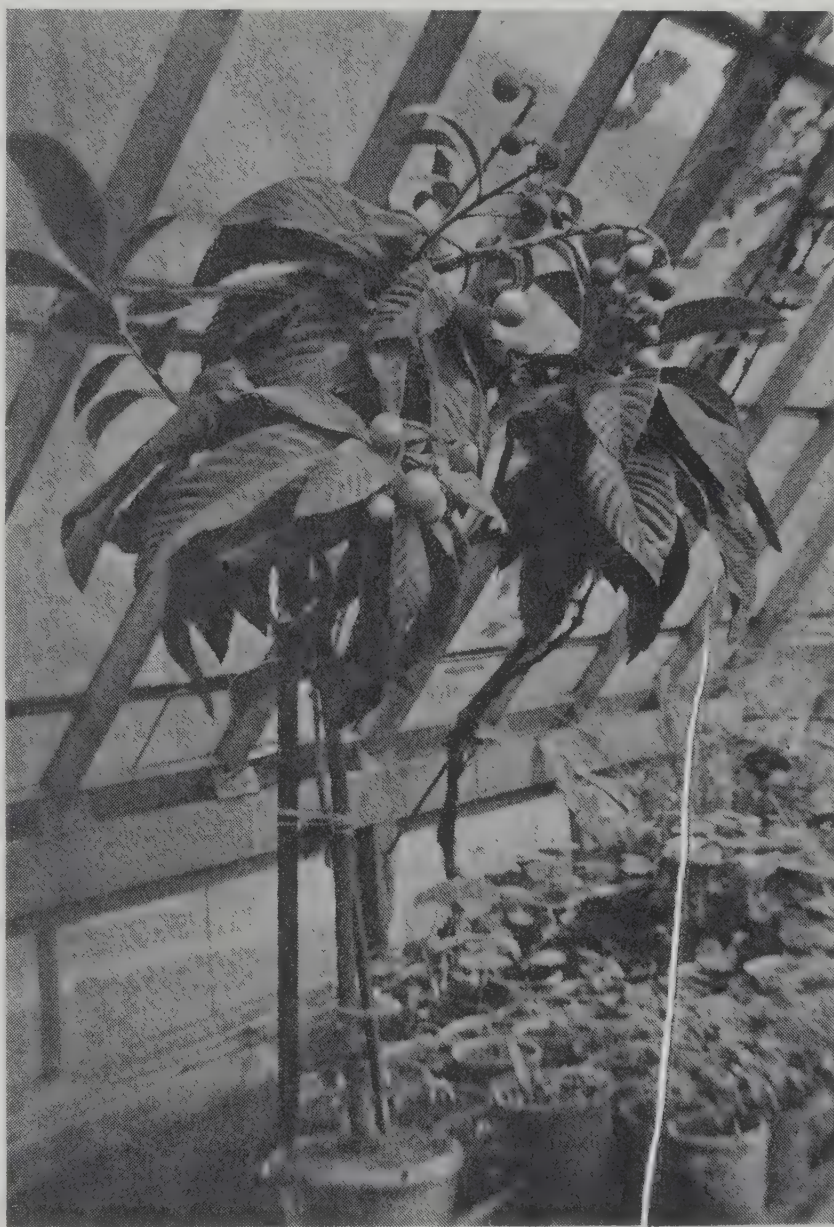
Growing Wild Strawberries in Pots.

—The following note may interest some readers of *THE GARDEN*. Two years ago, while staying for a few days in Cheshire, I gathered some ripe wild Strawberries off plants growing on dry hedge banks. The fruits were very sweet, and for the novelty of the thing I brought a few roots away with me to the South of England. These roots were potted in 3-inch pots, and have remained in them ever since. Last year the plants bore a few fruits, which were very sweet and of fair size. This year the plants were placed in a vinery in March, and they have done remarkably well, although not specially attended to. Several dozens of fruits are borne on a plant, and they are as large again as when ripened in their natural state. The plants would, no doubt, do better still if they were repotted and well cultivated. A lady to whom I gave a few fruits the other day said, "I had no idea that the wild Strawberry so grown would be so sweet."—G. G.

Primula farinosa.—The admirable way in which so many plants of the dainty native *Primula farinosa* were exhibited at the International Horticultural Exhibition by the Craven Nursery must have brought home to *Primula* admirers how beautiful this native plant really is, and how worthy it is of having its successful cultivation understood.

It is but seldom, save in its native habitats, that we can see it in such quantity in bloom, and when growing at home the plants are not, as a rule, so close together. It has already been so much discussed that the treatment it requires may not be considered worthy of additional space; but I am confident that the many who saw *P. farinosa* at Chelsea, as shown by the nursery named, will anxiously desire to own and to grow it well. It does not appear to object to wet in winter, provided the soil is well drained though moist; but the writer finds that it is desirable to give it plenty of water after it makes growth. Some lime, in the form of limestone chips or old mortar, has given additional vigour here, and in association with a soil of grit and loam, with a surfacing of chips, has given an excellent bloom this season.

The Summer Snowflake in Water.—At this season, when we are in possession of the flowers of the Summer Snowflake, *Leucojum aestivum*, it is well to consider how we can accommodate it in our gardens so as to give the best possible effect. In ordinary border cultivation it is a poor plant, so far as its habit is concerned, as the stems are too long for the size of the flowers, and the effect is far from good. In long grass it looks very well, but nowhere have I seen it look so pleasing as in about six inches of water, where it is not only prettier, but appears to thrive better than in any other place. I first saw this method followed at Mount Usher, where the late Mr. George Walpole pointed it out to me in such a situation—a small pond. Growing there in water, the leaves were



A SEEDLING LOQUAT IN A READER'S GREENHOUSE.

more handsome and the flowers finer. Those who have no water in their gardens should grow *L. aestivum* in moist soil and through other herbage, which would take at least 6 inches off the bareness of the stems.—S. ARNOTT, *Dumfries*.

FORTHCOMING EVENTS.

June 18.—Royal Horticultural Society's Meeting and Gladiolus Show. Lecture by the Rev. Professor Henslow on "Professor J. S. Henslow as Ecologist." Preston (Somerset) Gardeners' Association's Meeting.

June 19.—Yorkshire Gala (three days). National Hardy Plant Society's Show at the Royal Horticultural Society's Hall, Westminster. Jersey Rose and Sweet Pea Show (two days).

June 20.—Linnean Society's Meeting.

THE ROSE GARDEN.

THE UNRELIABILITY OF ROSE SPORTS.

SOME varieties of Roses sport very freely. For instance, Catherine Mermet has given us three that are really grand, viz., *The Bride*, *Bridesmaid* and *Muriel Grahame*. These sports would appear to be better fixed or more certain than many. Those from *Caroline Testout*, too, seem to come more true than most. I have had *Augustine Guinoisseau* carry flowers of *La France*, the variety it sported from. But the sports from *Comtesse d'Oxford*, viz., *Pride of Reigate* and *Pride of Waltham*, are very uncertain. I have frequently discovered two upon the same plant simultaneously. Another example occurs to me, and that is the two sports from *Heinrich Schultheis*—*Merrie England* and *Mrs. Harkness*. *Heinrich Schultheis* also sported its soft blush variety at two places simultaneously, and *Paul's Early Blush* is generally conceded as the prior name instead of *Mrs. Harkness*. I am sorry to say there is no reliability in these sports, or *Merrie England* would be our best striped Hybrid Perpetual.

Sir Rowland Hill sported from *Charles Lefebvre*, and when it comes true we have no other Rose that approaches its deep and yet clear port wine colour shaded with maroon; but we cannot depend upon it—in fact, not half of my flowers are of the desired colour. However, the blooms are always good, for they are either *Sir Rowland Hill* or *Charles Lefebvre*, and a better dark Hybrid Perpetual it would be difficult to select.

Then there are many climbing sports that have come from what were quite dwarf growers in their normal condition. Climbing forms can now be had of *Kaiserin A. Victoria*, *Mrs. W. J. Grant*, *La France*, *Caroline Testout*, *Cramoisie Supérieure*, *White Pet*, *Devoniensis*, *Lady Ashtown*, *Liberty*, *Papa Gontier*, *Niphetos*, *Perle des Jardins*, *Souvenir de la Malmaison* and others. The unreliability of these is very marked. Often we can find a plant quite as dwarf in habit as the variety was when first introduced. Even buds worked from the same shoot have produced both dwarf and climbing forms.

When we come to the *wichuraianas* we find *Dorothy Perkins*, to take only one example, producing many sports. Two very good ones have originated in our gardens. *White Dorothy* has more than once had the true *Dorothy Perkins* upon it, and what is even more remarkable, there have been distinct flowers in the same trusses of bloom.

Baroness Rothschild has given us *Merveille de Lyon*, *Merveille de Blanches* and *Mabel Morrison*, which keep as true as any among the Hybrid Perpetuals. Unfortunately, they are also minus perfume, or they might have some slight chance with that grandest of white Hybrid Perpetuals, *Frau Karl Druschki*, which, again, is minus fragrance.

Etienne Levet, *La Reine*, *Eugène Fürst*, *Baronne Prevost*, *François Dubreuil*, *Francisca Kruger*, *Bougère*, *Duchesse de Morny*, *Sunset*, *Mme. Falcot*,

Papa Gontier, Anna Olivier, Mme. Masson, Maman Cochet, Phyllis, Mrs. W. J. Grant, Mme. Willermoz, Suzanne M. Rodocanachi, Mme. Cusin, Conrad F. Meyer, Kaiserin A. Victoria, G. Nabonnand, Souvenir d'un Ami, Perle des Jardins, Lady Mary Fitzwilliam and General Jacqueminot all have the sporting character, and have already given us some good and distinct Roses. I have not exhausted the list in the foregoing, and perhaps there may appear little purpose in these notes; but I wished to show how easy it is for one to imagine he has a wrongly-named plant when the fault really lies in the reversion to the normal variety.

Sussex.

A. P.

THE NAMING OF ROSES.

AN American horticultural paper announces in its advertisement columns an offer of a prize of one hundred dollars for a name to be given to a new seedling Rose, which is said to possess all the good qualities of a red Rose from a commercial florist's point of view. I should say the competition is only open to florists, private gardeners and others engaged in horticultural work residing in the United States and Canada.

This offer is made by A. N. Pierson (Inc.), Cromwell, Conn. This certainly is one method of booming a Rose, but I do not suppose English or Irish growers have so exhausted their resources for names that they will copy our American cousins.

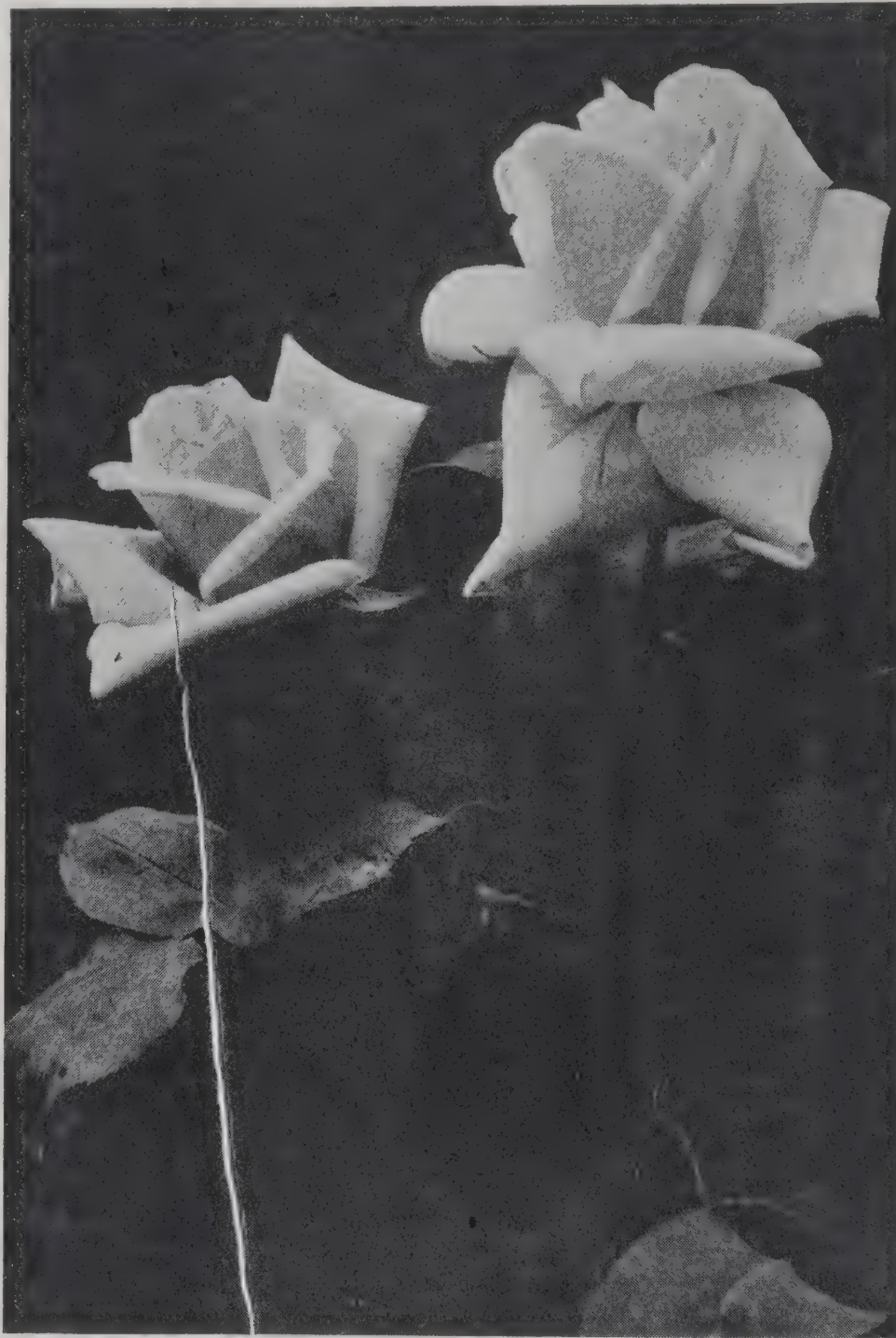
While upon this subject of names, I would enter a friendly protest against the practice adopted by American florists in giving other names to well-known Roses. For instance, they now call Antoine Rivoire by the name of Mrs. Taft. This would be bad enough if there was not already a Mrs. Taft among the dwarf-growing Polyantha Roses; but I think all Rose-growers will agree with me that such a practice is likely to lead to great confusion. They have already given the name of American Beauty to a Rose whose correct name is Mme. Ferdinand Jamin, and there may be others. I trust this practice will be stopped, or certainly not countenanced by responsible growers. We warmly welcome American novelties, and look forward to the pleasure of making the acquaintance of some of them. One named Madison should be a real winner, judging from its illustrations. It is a pure white flower, like The Bride, with foliage resembling Holly. It is said to be a splendid free-blooming Rose, and will produce a crop every five weeks in midwinter over there. This is not to say the variety will do the same here with our average sunless winters, but it should be a real beauty for spring flowering, also for outdoor work.

Eastwood, Essex.

WALTER EASLEA.

ROSE GROSSHERZOG FRIEDRICH.

THIS charming Hybrid Tea, which Herr Peter Lambert has given us, is a worthy introduction of the raiser of Frau Karl Druschki, Gustav Grunerwald and others. Its parentage is given as Caroline Testout crossed with Meta, that superbly-coloured Rose of Messrs. A. Dickson and Son's raising, and one may see in the bloom of the Rose under notice quite a distinct golden hue at the base of the petals. Its colour is of a rosy vermillion tint. Under glass it is particularly pleasing, the clearness of tint with a yellowish hue pervading the flower,



AN EXQUISITE HYBRID TEA ROSE: PHARISAER.

giving it quite a distinctness so much desired at the present day. I think we shall find Grossherzog Friedrich to be a real good thing.

P.

HYBRID TEA ROSE PHARISAER.

IN this variety we have a very beautiful Rose, most accommodating in its requirements, for it is alike excellent under glass and out of doors. It is a variety well known to exhibitors and worthy of a place in every collection as a garden Rose. In colour the flowers are very white, deepening in the centre to salmon rose. The flowers are large and the buds long. It is not one of the "fair weather" Roses, since the fine long buds open well in inclement as well as in fine weather.

THE FLOWER GARDEN.

SEASONABLE NOTES ON CARNATIONS.

Planting Seedlings.—This is one of the important tasks of the moment. It is, of course, well known that comparatively few of those amateurs who grow Carnations and Picotees bother about the cultivation of plants from seeds; they are content to have the superb flowers from the many magnificent varieties which the skill of the florist has placed at their disposal, but one cannot say that this is altogether wise. The raising of plants such as these from seeds has a fascination which grows on most people, and intelligent, maintained efforts are sure to be handsomely rewarded sooner or later. I do not suggest that amateurs should invariably trouble about cross-fertilisation; they seldom know the best lines on which to proceed, and consequently their successes are few and far between; but men like Douglas and others offer seed from their own strains, and something meritorious, if not of outstanding excellence, is sure to come from every packet of seeds. Let the soil be well prepared for the young plants. Dig it deeply and thoroughly, and do not omit to incorporate with it some sweet leaf-mould or refuse manure, as well as crushed mortar or lime rubbish. To achieve the best results the soil should be friable to a depth of not less than 18 inches, and if more, so much the better.

Mulching.—As an aid to the retention of soil moisture, to keeping the ground pleasantly cool, and to conveying a little food at a time when it will most certainly be appreciated, mulching with short manure is invaluable. It is by no means uncommon for the material to be spread much earlier in the season than this, and usually to decided advantage, but its food properties will have gone by now, and those who are able to rake it off and put on fresh manure ought not to hesitate to do so. The soil must be carefully hoed, or pricked over with a small fork beforehand, and then a thin covering of the manure spread down. It must be short and always loose to facilitate the free passage of water and air, or the benefits derivable from it will be much reduced.

Earwigs.—It may be well to remind the reader that one of the worst enemies with which he will have to contend when the plants are in flower are earwigs. They have a vicious habit of getting into the body of the flower, and it is not long then before they do irremediable damage. It is unfortunate that there is nothing really practical that can be done in the way of prevention, and incessant observance, with a view to instant destruction, should be the order of the day. Trapping must, of course, be done as far as possible, but conspicuous traps, such as are permissible among the

luxuriant-growing Dahlias, would not be tolerated for a moment in Carnation-beds. Pieces of dried moss or hay in small pots can be employed, but too much reliance must not be placed upon them, or disappointment is bound to come later.

Disbudding.—At the end of this month and during July we look forward to enjoying the beautiful reward for our labours in the past few months, and a decision must be come to immediately, if it has not been done before, as to the degree to which disbudding will be carried. As I said in my previous notes, I am generally in favour of the retention of three buds on a stem, but fewer or more may be chosen according to the fancy of the individual grower. As far as one can judge, each bud selected for development must be perfect, and some consideration ought to be given to their disposal on the stem, as when badly placed the artistic effect is not so good.

Morning Syringing.—Experience has proved to me that syringing in the early hours of the morning is especially beneficial to the plants in more ways than one. A great advantage lies in the fact that the probability of either green fly or thrips becoming dangerously numerous is reduced to the minimum, while the "grass" is assisted in no small degree, which means that there will be superior shoots for layering down when the time arrives to do such work next month. It cannot be doubted that either of these reasons alone justifies the labour and trouble involved in the operation, while there is the further merit of keeping the foliage clean and more attractive.

F. R.

THALICTRUM ANEMONOIDES.

VERY much resembling some of the Anemones in flower, this charming little plant is one of the most distinct members of the Meadow Rue family. It is quite a contrast to the taller-growing kinds, some of which attain a height of 6 feet or more, barely being more than 6 inches high when full-grown. Coming into flower in April, or even in March, it is a useful plant for the alpine-house, succeeding well in pans, or, for the shady and sheltered parts of the rock garden, in light, rich soil. It is one of the few members of the genus which have distinct and showy petals, and is a North American plant, usually found growing in open woods and shady places. During the last few years we have had some valuable additions to this genus in cultivation from China, of which the most striking and attractive is *T. dipterocarpum*. This plant grows to a height of 5 feet or more, with a large inflorescence of rose purple flowers, the citron yellow anthers forming a beautiful contrast. Rather smaller in habit, with similar flowers, is *T. Delavayi*, from the same region. Some of the forms of *T. minus* make elegant little tufts of finely-divided, Fern-like foliage, very useful for table decoration with cut flowers. A plant that is worth a place in any garden is the handsome *T. aquilegifolium*, which grows about three feet high, with very attractive foliage and panicles of pale feathery-like flowers. Of this species there are other varieties, one, with dark purple stems and flowers, being called *Thalictrum aquilegifolium* variety *atropurpureum*. Of the taller-growing kinds, like *T. glaucum*, there are many, and they make excellent subjects for the wild garden or water-side. All may be increased by division in spring or autumn, or raised from seeds which are freely produced.

W. I.

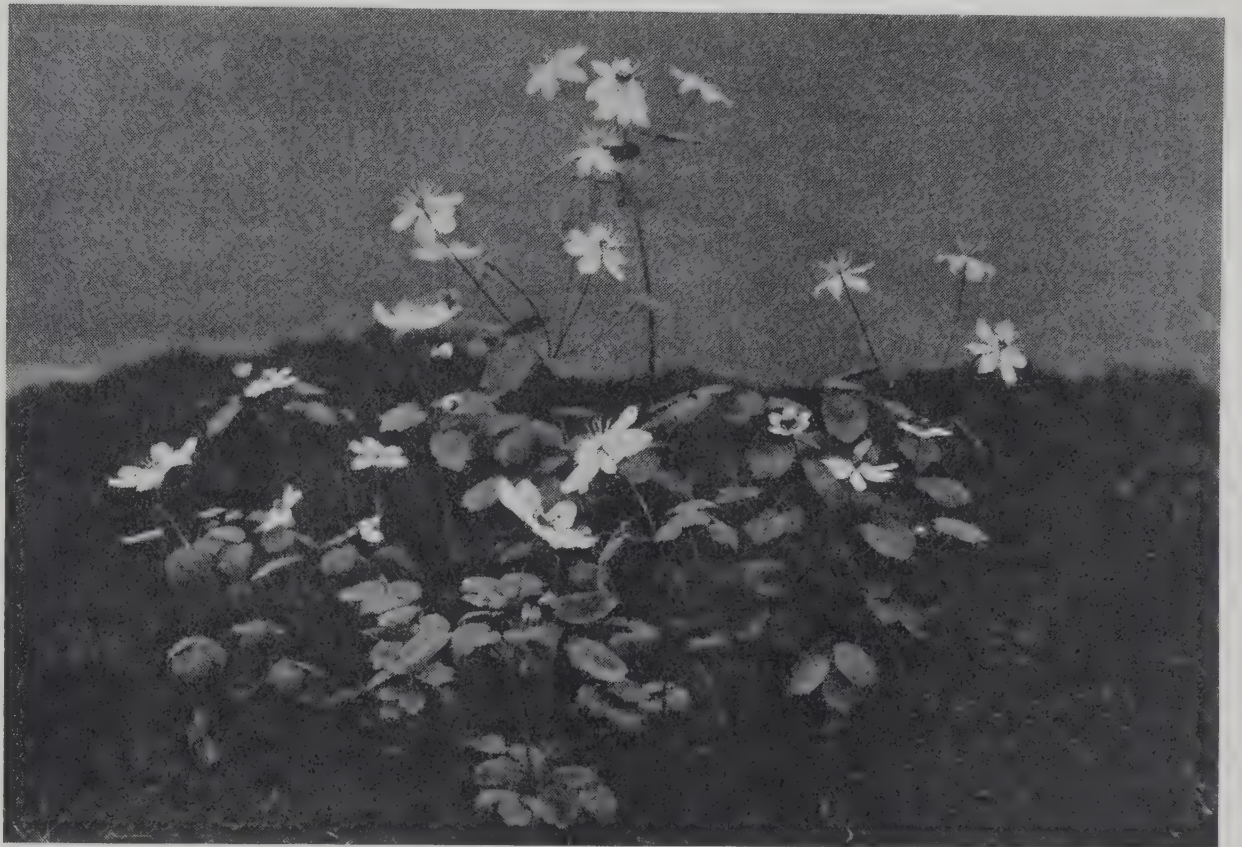
THE KITCHEN GARDEN.

TOMATO PLANTS OUT OF DOORS.

DURING the last few seasons many amateurs have undertaken the cultivation of the Tomato outdoors. The results have been good in many cases, considering the somewhat unfavourable weather experienced during the past summers. In the most favoured districts the plants require every attention to induce them to yield a fair crop. In cold, wet districts their cultivation outdoors cannot be recommended. Some fruit may be produced, but it is almost impossible for it to ripen under these conditions. The fruit in an unripened state is used for certain culinary dishes, and providing the aim is to produce fruit of this description, many growers in unfavourable districts plant in the most sheltered quarter at command. Endeavour to procure strong, short-jointed plants. If the plants are home-raised, so much the better. Keep

GROWING TURNIPS ON CLAYEY AND LIGHT SOILS.

SOME cultivators advocate the culture of Turnips in very firm soil. This is good advice when applied to soil of a light, sandy nature; but where clayey soils obtain it is a mistake to make them very firm. I have had to deal with the cultivation of large breadths of Turnips in both kinds of soils, and after a small experiment came to the conclusion that I could grow better roots in unfirmed, heavy soils than in those made quite firm by treading. Furthermore, I found that the roots swelled and were fit for table about a week earlier in unfirmed ground than in well-trodden borders. Both air and warmth penetrated the unfirmed soil and thus hastened growth. I have heard cultivators say, "Oh, it is necessary to have firm soil to produce nice roots with single tap roots attached." I have not found this to be a correct view in heavy loams, but I have noticed that certain varieties, and the best strains of them, grew perfect in form in unfirmed ground.



THALICTRUM ANEMONOIDES, A NORTH AMERICAN SPECIES WITH ANEMONE-LIKE FLOWERS.

the plants to one stem by taking out all side shoots as they appear. Do not overcrowd them.

Warm, sunny positions are most suitable, on a south wall or fence if possible. Secure the plants firmly, but allow plenty of room for the stem to swell freely. Attend to the pinching out of all side shoots. Give water when needed, and when three, or, in favoured localities, four, bunches of fruit have set, stop the plant by pinching out the top. Diluted manure-water applied occasionally will assist the plants to swell their fruit. By cutting off a portion of the foliage, sun and air gain free admission to the fruit. This operation is sometimes carried too far; cases have been known where every leaf has been ruthlessly cut from the plants even before the fruit is set. I have known blackbirds to attack the fruit when colouring. Varieties of Tomatoes are numerous. For outdoor planting, Holmes' Open Air, Winter Beauty and Satisfaction have proved excellent.

COLIN RUSE.

The Turnip fly is much more troublesome in some districts than in others. The flies do not like turpentine. If a wineglassful be well mixed with two gallons of water and syringed over the bed when the weather is dull, the insects will not attack the leaves to any serious extent. Frequent hoeing of the soil between the rows with the Dutch hoe is most beneficial where Turnips are grown in heavy soils; but undue trampling upon the ground must be avoided.

In light soils the early crops do well enough if the fly be kept at bay; but in the case of succeeding crops I advise inexperienced cultivators to put on a thin mulch of well-rotted manure, for this is of great advantage to the growing crop. It is a very common occurrence in summer-time to find Turnips exhibited which are too pithy to be fit for table use. Furthermore, I have noticed that nearly all such specimens have been grown in light, sandy soil; but where the rich surface mulch has been put on, the plants have been fed and the roots quite tender.

B.

THE GREENHOUSE.

THE BEST CROTONS.

THESE are grown with a view to tide over a time when cut flowers are scarce, and during the dull months they are delightful for house decorations. Plants in small pots can be used with great taste in the drawing-room or library at all seasons, and they are particularly useful for jardinières which will hold three or four or half-a-dozen plants, or they can be most advantageously used in large or small bowls for the dinner-table. There are some really brilliant colours among them, and if a good batch is raised every year, some nice plants are always available, even in 3-inch pots. These are best when the tops are what is termed "ringed," that is, the top rooted before being taken away from the plant. This is best done by preparing some peat and sphagnum moss, and after an incision is made with a knife around the bark, this material should be bound tightly around and kept well sprayed till roots are emitted through the moss all round. This does not take long if the plant is healthy and the moss kept damp. On no account must it be allowed to become dry.

The plants should then be taken off and potted immediately, placed in a small propagating-case and kept moist and close for a week or ten days, when they will be established. At no time should these plants be overpotted; it is really surprising how big a plant can be grown in a small pot with care in watering and feeding. On the other hand, it is notorious what wrecks can soon be made of them by injudicious handling.

Very good varieties are among the following. Some well-known old favourites still hold their own when well grown. Queen Victoria, orange yellow, broad leaves; Lucy, narrow, twisted leaves, green and crimson; Weismannii, long, drooping leaves, variegated green and yellow; Warrenii, long leaves, remarkably twisted, like a corkscrew, yellow and red; Elysian, long, narrow leaves, lemon yellow and rose, very handsome when well coloured and grown; Laingii, narrow leaves, stems and footstalks red and yellow; Mrs. Dorman, yellow and crimson, very conspicuous; Aigburth Gem, leaves crimson and narrow; Mrs. Luther, narrow red leaves and of fine habit; and Souvenir de Thomas Rochford, bright red and very graceful foliage.

W. A. Cook.

The Gardens, Leonardslee, Horsham.

THE SUMMER TREATMENT OF BOUVARDIAS.

MANY Bouvardia plants are spoiled every year through subjecting them to too much heat and confining them from the air. Stunted, sickly

plants in large pots may sometimes be seen in a warm greenhouse. Such specimens are not worth retaining, and should be discarded at once, as it is almost impossible to bring them to a normal state of health again. From about the middle of June to the middle of September the plants do remarkably well planted out in open borders. They must be lifted and carefully repotted, and be placed in frames before the earliest frosts come. If cultivators cannot find it convenient to plant out the Bouvardias, they should plunge the pots in the border and leave them there during the period named. The soil in the border must be well

is a wise plan to stop as early in the season as possible; then the resultant new ones will have ample time to become strong and ripened. Wonderfully fine plants may be grown in the way described in one season, and bear extra large trusses of flowers.

AVON.

A BEAUTIFUL WHITE-FLOWERING CACTUS.

(CEREUS AMECAMENSIS.)

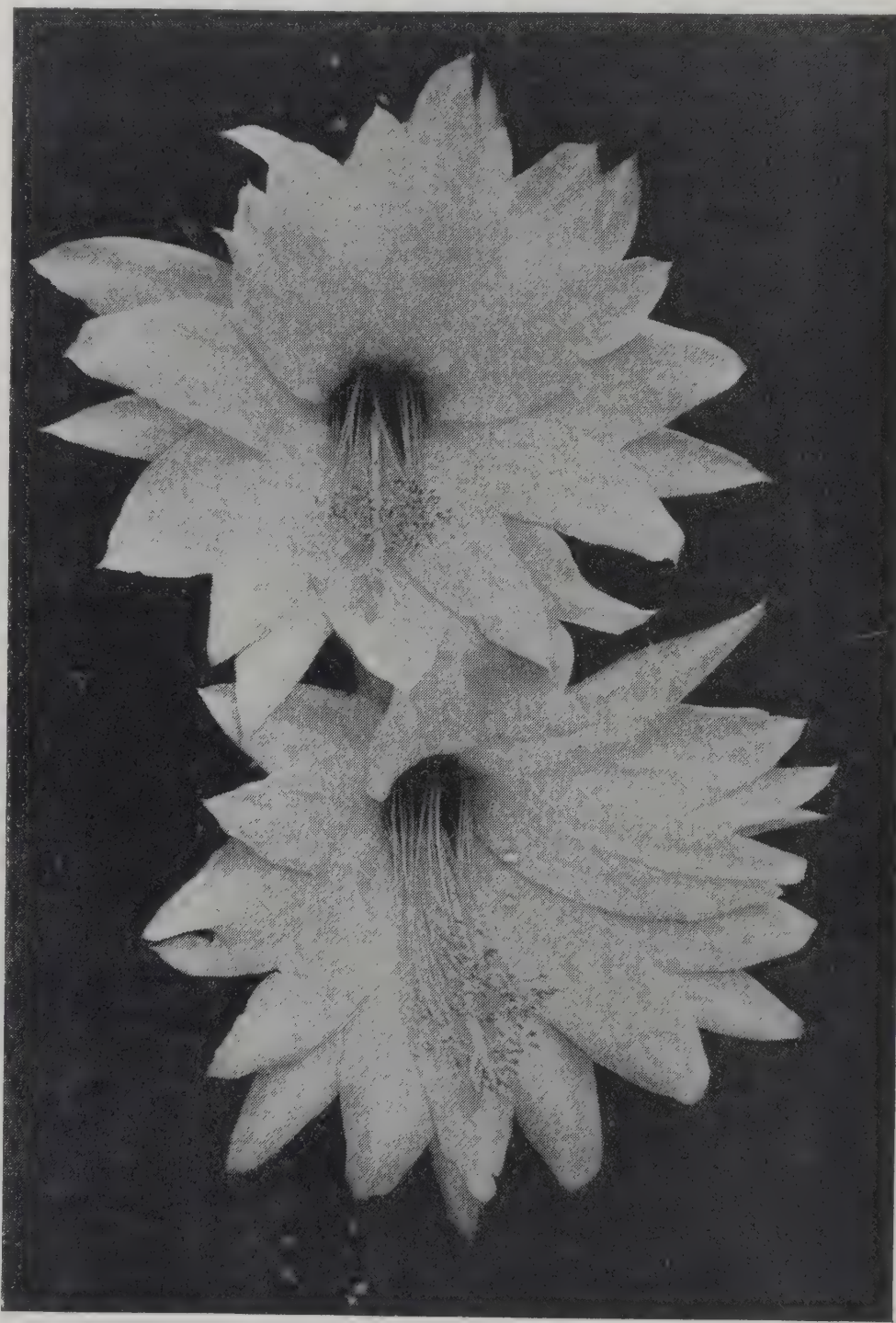
FEW, if any, of the exhibits brought before the floral committee at the meeting of the Royal Horticultural Society on May 14 attracted as much attention as did this delightful member of the Cactus family, of which flowering examples were shown by Mr. A. Worsley of Isleworth. A cut branch was exhibited, and, judging by its appearance, the plant is, I should say, in common with other members of the genus, of a rambling habit of growth. On the specimen shown, which was about four feet in length, there were two clusters of flowers, one at the top and the other near the bottom, apparently at a joint. There were five flowers or buds in each cluster, so that it would appear to be, when fully established, decidedly free flowering. The expanded flowers are 8 inches to 9 inches in diameter, and of the purest white, except a slight green suffusion just in the centre. The petals are much pointed, hence the whole contour of the flower is very different from that of the Phyllocacti, which, in many gardens, are the only Cactaceous plants grown. A few such exhibits as this Cereus, and a noble Phyllocactus which was shown at the same time, should serve to rescue some of these delightful flowering plants from the obscurity into which they have now fallen.

H. P.

HOW TO GROW THE STREPTOCARPUS.

MANY greenhouses and conservatories attached to dwelling-houses are partially shaded, and, of course, in such structures it is a very difficult matter to keep up a continuous display of flowers, as many kinds will only bloom sparsely in the circumstances. The Streptocarpus will, however, grow and flower

freely in partial shade. The plants are, moreover, very suitable for placing in groups on the floor of a house; and as there has been a great improvement in the strains during the past few years, there is added inducement to grow a batch of plants. The resultant seedlings from seeds sown early in the spring are now well advanced, and they must be given pot culture. It is not wise to disturb the seedlings too soon, because, as a rule, they form one large leaf first, and it is immediately under this leaf that the strongest roots grow. If lifted from the seed-pan too soon, the growth of the large leaf and the roots is arrested for a time.



A BEAUTIFUL WHITE-FLOWERING CACTUS (CEREUS AMECAMENSIS.)

broken up and both sand and leaf-soil mixed with it freely; then put out the plants 18 inches apart each way and make the soil very firm around the roots. The surface of the bed must be kept as flat and level as possible, in order that watering may be easily done. The position should be an open one, so that the wood may be thoroughly ripened, as immature wood will not bear flowers. While the plants are growing freely they may be fed with weak doses of clear soot-water and liquid manure.

It will be advisable to stop the shoots at least once while the plants are growing in the open air. The longest shoots must be stopped first, and it

These plants will flower during July, August and September; but it is best to pinch off the flower-stems from a certain number of the plants, and so secure extra fine flowering specimens the next year. The best compost is one made up of fibrous loam two parts, leaf-soil one part, sand and rotted manure one part. Use very clean pots and crocks, and press the soil gently around the roots of the young plants so as not to bruise them. Give water at once; then place the plants on a bed of ashes or shingle on the stage of a greenhouse. After the first watering be very careful not to apply too much, but on every fine day syringe the pots on the outside twice; this treatment induces quick root-action. Repot the plants as required, and those denuded of their flower-stems for next year's display must be grown in a cool frame during the months of July, August and September. SHAMROCK.

TREES AND SHRUBS.

HARDY AZALEAS.

IT is difficult to imagine a more pleasing feature than a well-placed and well-flowered group of hardy Azaleas, for the colours of the flowers are so bright and varied that they appeal to everyone, while they retain a delicacy which does not offend the most sensitive nature. In addition, the majority are deliciously fragrant, their perfume scenting the garden for a considerable distance.

Unfortunately, they are not everybody's plants, for they may only be grown successfully in places where lime is not prevalent in the soil to any great extent. Azaleas at Kew have for long been one of the fairest features of the Gardens, and many a pilgrimage is made annually for the purpose of seeing them in flower. There they are massed in large beds on a lawn amid groups of mature Beech and other trees, the surrounding greenery providing a fitting setting for the central mass of flowers. Very effective also are the Azaleas at Leonardslee in Sussex and Penllergare in South Wales, where they form an extensive undergrowth to woods of Pine and other trees. Various other gardens also about the country owe a good deal of their May beauty to hardy Azaleas, and a glance at the accompanying illustration will be sufficient to show how fine these plants are in the Japanese garden at Gunnersbury House, one of the seats of Mr. L. de Rothschild.

Azaleas are no new addition to the occupants of the garden, for in some establishments they were as popular thirty or forty years ago as they are to-day; but many more people are now taking advantage of their decorative qualities than at any time in the past, and there are few gardens of any pretensions which do not include representatives of the group. The majority of the kinds grown are hybrids, the species from which they were raised being rarely met with outside botanical establishments. Several North American species and one from the Caucasus formed the basis for the early operations of the hybridist, while more

recently a species from the Far East has been made use of. Continental growers were most conspicuous in the raising of new varieties in the early days, the nurserymen of Ghent being particularly successful, so much so, in fact, that the whole group of hardy Azaleas came to be known as Ghent Azaleas, a name which is retained in some quarters to the present day. Very little behind the Ghent raisers were several English firms, Messrs. Waterer of Knap Hill and Messrs. Cripps of Tunbridge Wells being among the pioneers in the movement, and to these firms we are indebted for some of the handsomest kinds, Messrs. Waterer being specially interested in the raising of red and other rich-coloured flowered kinds. In the early days many of the varieties or hybrids were given distinctive names, and even now such

or so later, their best time being mid-June. Crossed with other varieties, a number of late-flowering kinds have been produced which prolong the flowering season over a period of several weeks. *A. viscosa*, the Swamp Honeysuckle of North America, is the latest of all to bloom, its flowers often being in good condition in July.

The Caucasian *A. pontica*, which is correctly *Rhododendron flavum*, is a free-growing, fragrant, yellow-flowered species. Crossed with *A. calendulacea*, it has produced a number of the more vigorous yellow and orange coloured kinds. It blooms with *A. calendulacea* and *A. nudiflora* in May.

From China and Japan we have the highly ornamental *A. sinensis*, or *A. mollis* as it is frequently called, which has become so popular of



AN EFFECTIVE GROUP OF AZALEAS IN THE JAPANESE GARDEN AT GUNNERSBURY HOUSE, ACTON.

kinds may be obtained; but, as a rule, it is not necessary to purchase named sorts to form a showy collection, for among mixed seedlings all sorts of coloured flowers may be obtained. Some nurserymen make a speciality of one or more particular kinds; others cultivate all sorts.

The American species which have entered into the production of the garden Azalea are *A. nudiflora*, *A. calendulacea*, *A. occidentalis*, *A. arborescens* and *A. viscosa*. Of these the former two have taken a greater part than the other three. From *A. nudiflora* many white and pink kinds and varieties with delicate shades of colour have been obtained, whereas the blood of *A. calendulacea* can be traced in sorts with red, scarlet and orange scarlet flowers. *A. occidentalis* and *A. arborescens* have white or pink flowers. They are taller and more upright in growth than the other kinds, and bloom a fortnight

late years for forcing. The flowers vary in colour from cream to orange and from pink to scarlet and red. The various varieties may be distinguished from the American and Caucasian kinds by reason of the larger and more shapely flowers and the absence of fragrance. Blossoming earlier than the other kinds, it is less useful for general outdoor work, for the flowers are sometimes killed by late frosts. Hybrids are, however, being raised between it and later kinds which stand better. Nevertheless, it is a most beautiful and popular kind for forcing.

In addition to the value of the flowers, Azaleas have another asset, for the foliage colours brilliantly in autumn. Although still spoken of as Azaleas, all these plants are now, strictly speaking, *Rhododendrons*, Azalea not being a recognised genus.

WHITE LILAC WITH DOUBLE BLOSSOMS.

A VARIETY of the Lilac with double white flowers is mentioned by Loudon, but for the improved varieties of the present day we are indebted to the firm of M. V. Lemoine et Fils, Nancy, France. It is now about thirty years since M. Lemoine distributed the first of his seedlings, and from that time onward numerous varieties have been sent out from the same source. Of the white-flowered kinds, that herein figured, Miss Ellen Willmott, is remarkable for the large size of its individual flowers, and as they are borne in massive trusses and the habit of the plant is all that can be desired, it deservedly occupies a foremost place among double-flowered Lilacs. This variety is at present not very generally known, though it was first sent out in the autumn of 1903, the price then being eight francs each. Of the older kinds, the first place must, I think, be assigned to Mme. Lemoine, which before the advent of Miss Ellen Willmott was looked upon as possessing every desirable feature.

M. Campbellii is the first to open, but this is only supposed to do well in favoured districts. It does well here, and my impression is that it does not flower till it arrives at a mature age.

Other good varieties are: *M. acuminata*, which forms a tree very quickly. *M. cordata*, a North American species with yellow flowers about three inches to four inches across, is not such a free bloomer. *M. Lennéi* is a favourite, and flowers in April and May, a rich purple colour. *M. macrophylla* has enormous leaves, 2 feet long, with bell-shaped flowers of great size. *M. parviflora* has beautiful white flowers, with red stamens when the flowers are open. *M. soulangeana* and *M. s. nigra*, very dark purple. *M. tripetala*, a North American species with huge leaves and white flowers. *M. Watsonii*, similar to *M. parviflora*, but with larger blooms and very sweet-scented. *M. glauca*, a North American species, is nearly evergreen, and its creamy white flowers are produced all through August. It is sometimes called the Swamp Magnolia, as it does best in a

of the latter an inch across clothing the panicles. If anything, the combination of the two renders the inflorescences more attractive than otherwise. The colour of the flowers is creamy white. In gardens the variety *grandiflora* is more generally met with than the species, being extensively grown in pots for greenhouse decoration. It is also valuable for the outdoor garden, and differs from *H. paniculata* by producing nearly all sterile flowers, while the flowering season is a month or six weeks earlier. Hydrangeas delight in a well-worked, rich, loamy soil, with a mulching of good manure applied in June. Propagation is by cuttings. A. O.

THE FRUIT GARDEN.

THE STONING AND SCALDING OF GRAPE BERRIES.

WHEN an amateur cultivator has done all he could to produce a fine crop of Grapes on his Vines, he feels greatly disappointed if many bunches are spoiled through the scalding of the berries. Some varieties scald sooner than others. The berries are most likely to scald just at the time when the stones are hardening. Directly the berries have set, a closer atmosphere must be the rule until that stage when the stones in the berries commence to harden. The hardening of the stones begins, in the case of the varieties Buckland Sweetwater, Foster's Seedling, Black Hamburgh and Madresfield Court, about six weeks after the flowering stage. Alicante, Muscat of Alexandria, Gros Colman and other late-keeping varieties are about ten days later in hardening their stones. The guide here given will be helpful to inexperienced cultivators.

Now, as soon as the hardening process begins, the berries cease to swell as rapidly as before. For about twenty days there is not much perceptible difference in their size. Up to this point the flesh of the berries is very firm, and moisture must not be allowed to settle on them in excess while the sun shines on the house.

Grapes growing in a properly-constructed vinery, when well managed, rarely scald; but Vines are grown in greenhouses and other structures which are not ideal for this particular purpose, and then, with the best possible management, some berries are lost through scalding. To prevent this loss the cultivator must do one of two things without fail, namely, open the ventilators an hour before the sun shines on the house in the morning, or at ten o'clock each night open the top ventilators about one and a-half inches wide and leave them so throughout the night, increasing the ventilation before seven o'clock the next morning.

Any moisture lodging on the berries will be dispersed before the sun gains much power, and the atmosphere generally will be drier. Many berries are scalded which are never exposed to the direct rays of the sun. This is caused by a close, moist atmosphere in the house while the sun is shining brightly on it. Very early closing in the afternoon has the same bad results. Directly the berries soften naturally, the last swelling commences, and there will be no more scalding unless the house is kept closed in the daytime when the sun is shining. Ripening Grapes need a good circulation of warm air about them. No feeding must be done while the berries are stoning, but the soil should be kept in a uniformly moist state. AVON.



THE DOUBLE-FLOWERED WHITE LILAC: MISS ELLEN WILLMOTT.

It is now largely grown for forcing purposes, for which it is well suited, as it may be readily flowered in a comparatively small state. It is, moreover, a very handsome shrub, as a well-balanced specimen, about fourteen feet high, near where I am writing will testify. Other good double whites are Mme. Abel Chatenay and Mme. Casimir-Perier. H. P.

THE BEST MAGNOLIAS.

THE early-flowering Magnolias have been wonderfully good this season in various parts of the country. When a good selection is grown, they are extremely interesting, and extend their flowering season from March to August and September. Among the first to open are *M. conspicua* and *M. stellata*. These are perfectly studded with flowers, as is that rare variety *stellata rosea*. *M. alba superba* and *stellata* are fine for massing, and are used as such, their appearance when in bloom being splendid and resembling a bank of snow, especially when an evergreen bank of shrubs is provided as the background.

damp, moist position. *M. grandiflora* and its varieties complete a fine set.

Leonardslee Gardens.

W. A. COOK.

HYDRANGAEA PANICULATA.

THIS hardy Japanese species is of more than ordinary value in gardens, as the flowers are not only very showy, but are produced during August and September. Compared with the months of May and June, this is a dull season with flowering shrubs in the pleasure grounds. To obtain the best results good cultivation and fairly hard annual pruning are necessary, as, when allowed to grow naturally, the panicles of flowers are much smaller, although more numerous. To obtain large panicles 1 foot in length and 6 inches to 9 inches through, fairly hard pruning is necessary in February or March. Thinning of the young shoots must also be practised, leaving only from six to ten growths to mature, according to the size of the plants. In numbers the fertile blossoms far exceed the sterile ones, but there are ample

GARDENING FOR BEGINNERS.

A PLANT FOR THE AMATEUR'S GREENHOUSE (CELSIA CRETICA).

ALTHOUGH this plant has been known in the British Isles for a very long period, it is only of late years that it has become generally popular, its presence at an earlier date being almost wholly confined to those gardens where botanical collections were encouraged and plants were grown as single specimens, or in small numbers at the best, rather than as large groups. The advent of the grouping or massing system in gardens led to many plants showing themselves to better advantage than had been possible before, and *Celsia cretica* for one proved itself to be a really valuable decorative plant.

Although it may be grown out of doors during summer, it cannot be called a thoroughly hardy plant, and it is perhaps of more general usefulness for greenhouse decoration than for the embellishment of the outdoor border. It is a native of the Mediterranean region, and is strictly a biennial, although it may be treated as an annual. In general appearance some resemblance is noticeable to a dwarf *Verbascum*, the flowerless plant being represented by a rosette of green, strap-shaped leaves. As flowering-time draws near, the inflorescence appears from the centre of the leaves, and eventually rises to a height of 2 feet to 3 feet, bearing a profusion of showy, yellow flowers, the whole inflorescence being lighter and more graceful than that of a *Verbascum*.

Propagation.—This is confined solely to seeds, and by making sowings at intervals of six weeks a succession of flowers may be kept up over a considerable period. Plants from seeds sown in May ought to blossom during the following February if grown indoors, while plants from seeds sown at the end of July or early in August, and kept growing quietly, would be in excellent condition for planting out of doors when all danger of frost had gone in spring. By sowing seeds indoors in February, flowering plants for the greenhouse can be obtained for late autumn, while the same plants can be got to blossom out of doors if kept growing vigorously. Even by sowing seeds out of doors in March, flowering plants may sometimes be had by autumn, but, as a rule, they are less vigorous and less reliable than those which were raised the autumn before.

The Cultivation of *Celsia cretica* is not attended by any serious difficulties. The seeds may be sown in a compost composed of two parts fibrous loam, one part leaf-mould, and one part silver sand. As the seeds are very small, pass the upper soil through a fine sieve and cover very lightly. A well-drained pan or box may be used as the receptacle, and the seeds must be sown thinly. As soon as the seedlings are large enough to handle, prick them off in pans or boxes an inch apart each way. When the leaves meet, put the plants

singly in 3-inch pots, using similar soil, but replacing half of the sand with well-rotted manure, such as is taken from an old Mushroom-bed. During this time a moist greenhouse temperature may be given, taking care to provide shade when the sun is

the best plants in, for if overpotted they become unsightly. When the final pots are well filled with roots, the plants must be kept going with the use of stimulants in the form of cow-manure-water, soot-water and Clay's Fertilizer. Once a good batch of plants has been flowered, there is no difficulty in obtaining sufficient seeds for future requirements, for seeds are produced and ripened freely. Those plants which are planted out of doors should be placed from 9 inches to 12 inches apart, according to strength, and even a little more room would not do any harm. When grown indoors, care must be taken to keep the plants clean, for they are subject to attacks of thrips and red spider, and once badly infested they rarely recover; therefore it is necessary by proper ventilation, keeping a moist atmosphere, and by careful attention to watering, to keep them in the best possible health from the seedling stage onwards.

THE CARE OF CARPET BEDS.

ALTHOUGH carpet-bedding is not as popular now as it was a generation ago, there are many gardens in which several beds are so filled. In the first place, the plants must be so arranged that they will form a certain design. If allowed to grow untrimmed, afterwards the plants would soon present an untidy appearance, the leaves of one kind or variety growing and intermixing with those of others. Timely pinching of the leaves is an essential part of the work necessary to keep the plants in proper order. There must be no indiscriminate cutting off of leaves; the ends of the leaves or young shoots must be so shortened that every plant will be confined to its proper place and still have the appearance of not having been manipulated at all. Frequent—weekly—pinching of shoots and leaves is necessary, then the foliage will always retain its rich colouring. Plants allowed to grow too long before they are pinched get coarse and lose their colour very much. Odd, coarse plants must be removed altogether, and the gaps made filled with others from the reserve stock. It is always a wise plan to retain a few specimens in case they may be required at some future date.

HOW TO GROW BIG ONIONS.

A VERY large Onion, if flabby and not very firm, is really worthless. Hundreds of cultivators strive to grow big Onions, and the latter are useful for several

purposes if they are firm and well ripened. Some persons bend down the necks of Onions in order to make them bulb more quickly. It is never necessary to depress the tops of well-grown plants—they will ripen in due course naturally; and if bent too soon and violently, the inside scales are broken and the plant commences to produce young tops again vigorously. Of course, when this happens, the Onion is ruined. Keep the surface of the bed hoed and well mulched with rich manure.

SHAMROCK.



CELSIA CRETICA, AN EASILY-GROWN GREENHOUSE PLANT.

powerful in the middle of the day. Throughout summer no fire-heat will be necessary, and even in winter, except for those plants which are coming on to flower, it is only necessary to provide sufficient artificial heat to keep damp and frost away. Thorough ventilation is, however, very necessary, and strict attention must be paid to watering. Never allow the plants to become starved, but, as soon as the pots are nicely filled with roots, repot until pots 6 inches in diameter have been reached. These, as a rule, are quite large enough to grow

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Liliums.—Keep the growing plants well supplied with water, and where the varieties are only in 5-inch pots, liberal quantities will be needed of properly-diluted farmyard manure, alternated with some good artificial fertiliser. The varieties of *L. lancifolium* are especially adapted for small pots, and their usefulness when so grown for house decoration is greatly enhanced.

Francoa ramosa.—Give the flower-spikes as they extend a neat support, and see that the plants do not suffer for the want of water. A shady position out of doors or in a cold frame on a good, firm cinder basis will suit the plants admirably. Once or twice a week, when the soil is not too dry, give some diluted manure-water. Sow seed for next season's flowering plants.

Tree Carnations.—The earliest-rooted plants will soon be ready for their final shift into 5-inch or 6-inch pots. For this compost use a sprinkling of bone-meal and a little plant food, and let the compost consist principally of good fibrous loam. Pot firmly in clean and well-drained pots. For an early display the growths should not be stopped much after the end of June. Later-struck plants should be potted on as becomes necessary, and grown as sturdily and healthily as possible. If the plants through the summer months are placed out of doors, temporary protection should be afforded in the event of heavy rains.

The Shrubberies.

Laburnums.—At the time of writing these are making a fine feature, and especially the better varieties of Laburnum, which are so distinctly superior to the old variety, and eminently suited for planting as standards on lawns or elsewhere. The following few are all worthy of inclusion: *Laburnum vulgare Alschingeri*, *L. Vossii*, *L. Parksii*, *L. quercifolium* (the Oak-leaved), and *L. Adamii*, producing both purple and yellow trusses.

Philadelphus.—The Mock Oranges for late May and early June flowering are particularly attractive. A few of the better varieties should include *Boule d'Argent*, *Bouquet Blanc*, *Candelabr *, *purpureo-maculatus* and *coronarius foliis argenteo-variegatis*, a pretty form. A few other shrubs of special merit are *Viburnum tomentosum plicatum*, *Syringa villosa*, *Cytisus andreanus*, *Tree Lupines*, *Olearia stellulata*, *Cistus* and *Helianthemums* in variety, and *Spir a bracteata*.

Hardy Fruit Garden.

Early Cherries.—The earliest-maturing varieties of Sweet Cherries should receive copious supplies of water, and stimulants washed down will prove valuable in assisting the crop. The fruits will soon commence to colour, and, before placing the nets over the trees, all the growths required for furnishing bare spaces and extension should be carefully and neatly tied in, the weaker ones being pinched back to form spurs for fruit-buds. Discontinue the use of any insecticide when the fruits commence to change colour.

Thinning of Fruit.—The majority of the wall trees are now advanced enough to admit of a preliminary thinning where too crowded, as it is quite evident which are swelling away freely. Where the crops of Peaches and Nectarines are light, only deformed and badly-placed fruits should be removed, any final thinning that may be necessary being done after the stoning is finished. The final disbudding should be carried out and the growths neatly tied in. Continue to syringe the trees as often as possible in the morning or evening.

Hardy Vines.—These will require attention, otherwise the growth will become congested and the bunches suffer in consequence. Avoid overcrowding, neatly and firmly secure strong shoots where required for extension, and stop the laterals and thin out the bunches where too thick, leaving only one to a spur in any case.

The Kitchen Garden.

Thinning-Out of the crops should not be left longer than is absolutely necessary, and whenever possible choose showery weather, as then the

plants do not feel the disturbance at the root so acutely.

Kidney Beans.—Make another sowing of Dwarf Beans, and also one of Runners, to succeed the earliest sown, and if the ground is dry, soak the seeds for twenty-four hours before sowing to assist quicker germination. Sprinkle the young plants with a rosed can or syringe them in the evening when the weather is warm and dry. This also has a beneficial effect on the setting of the flowers.

Parsley.—Make a sowing within the next week or so for providing the supply for next winter. Assist growing plants during showery weather with a dusting of soot, and when possible aerate the surface soil with the Dutch hoe.

Celery.—Continue to take out trenches, and plant as they become ready for succession. If the ground is dry, the plants must be well watered in.

Potatoes.—Keep the ground between the rows well hoed, and earth up as becomes necessary.

The Flower Garden.

Hoeing.—This is equally as important in this branch of gardening as in any other and stimulates the growth of newly-planted subjects in a marked degree; it is especially valuable where watering cannot be carried out with any degree of thoroughness, as the frequent moving of the ground forms a loose, fine surface which acts as a mulch.

Summer Bedding.—To encourage this, and to get it established as quickly as possible, the plants and surroundings should be damped each evening and the ground well watered occasionally. Complete the staking of the plants as early as possible, and to encourage growth the flowers of many things may be removed for the first week or two.

Plants in Vases.—These are usually very effective when nicely planted with suitable subjects. The root-run, as a rule, though, is limited, and coupled with the exposure to the sun and air the soil quickly becomes dry and requires constant and careful attention. E. BECKETT, V.M.H.
Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

The Fruit Garden.

Grafts.—These are now making growth, and where several are on one stock, the ill-placed shoots should be rubbed off and, at the same time, all the growths that have pushed on the stocks themselves.

Plums and Pears.—What is termed the breast-wood may at any time after this be removed. It is better that most of it should have been rubbed off earlier in the season, but as a rule that is neglected, and now that the rush of work for the season has lessened, it may be seen to. It is a very great mistake to shorten every shoot to a stated number of buds, because in well-furnished trees that results in overcrowding. Much to be preferred is the practice that reduced the number at once by clean excision, leaving only a sufficient number of shortened shoots to replace weakly spurs that have been removed.

Peaches.—In the North, wall trees, as a rule, do not ask in most seasons for water at the root, the Peach being an exception in some cases. Should the weather be dry, therefore, and the soil light and porous, an occasional soaking of much-diluted manure-water will be very beneficial, not only in giving vigour to the growth, but in keeping down red spider, which is often responsible for much damage to the health of the trees. Very late varieties should be lightly fruited.

Fruits Under Glass.

Lady Downe's Grape.—In thinning this variety give each berry plenty of room and leave no berries whatever in the centre of the bunches. These usually rot if left during winter.

Tomatoes.—In airy, well-ventilated structures these will require much water at the root, while in frames and low pits water must be applied with the utmost caution. Crops maturing will ripen more readily if the water at the root is limited to the merest amount necessary to keep the foliage from flagging. Late crops in cold pits should be limited to the number of trusses they are likely to bring

to maturity before November. These may be grown with the minimum of ventilation.

Cucumbers.—By removing worn-out shoots and replacing them with young ones in conjunction with means, such as repeated surfacings, of keeping up a supply of active roots, these can be kept in a free-bearing condition for a very long time. Some growers give the minimum of ventilation, but the plants seem to be less subject to collapse when judiciously ventilated in fine weather. Only a limited number of fruits should be allowed on the plants, otherwise they will exhaust themselves by overcropping. Plants in frames may be treated in much the same manner, being particularly careful that only enough young shoots are left to fill the allotted space without overcrowding.

The Vegetable Garden.

Cauliflowers.—Sow seeds of a second - early sort for autumn cutting. In unfavourable soil sow the seeds where the plants are to remain.

Leeks.—The planting out of the main crop need be no longer delayed. Sort the plants according to size, so that the largest may be lifted for use as required. Thoroughly coat the roots with a mixture of soil and water worked into a soft mud; then lower each plant into the deep hole made with a dibber for it, so that the tips of the leaves only are seen above the ground; pour just a little water into each hole and the plants may be left to themselves. It is usual to draw deep furrows, which are afterwards levelled down when the Leeks have grown to require soiling.

French Beans.—These should be arranged so that each plant has at least one foot in the row; where closer than that, thin them, and with the thinnings make up any blanks in the rows. Runners growing as dwarf plants need much more space, and as soon as the shoots begin to run it is very important to pinch them, and to continue doing so, else they become a tangled mass which produces only a few pods compared with those that get more attention. Those trained on strings or sticks must not be stopped till they have attained the height desired.

The Plant-Houses.

Cinerarias.—The latest batch must now be provided for by sowing seeds at once. Give cool treatment throughout.

Calceolarias.—Sow seeds of these also. The seeds are so small that they must not be covered, a good way of giving the needed protection to them being to spray the surface of the compost after sowing, which settles the seeds. Then cover the receptacles and stand them in a cold frame or under a hand-glass placed in a position where the sun never reaches it.

The Flower Garden.

Watering.—If the weather be dry, Phloxes, Pyrethrums and Spir as soon suffer; therefore apply water at once before they show signs of distress.

Pinks.—This is the proper time to propagate these by means of pipings, which are the points of the growths pulled out with a quick twitch. These are perfect without further manipulation. They root best dibbled into soil under hand-glasses the glass of which is blurred, watering the soil before placing them on; but they also root in the open, though not so expeditiously.

Stopping Plants.—There are a few desirable plants that grow so tall as to be less useful on that account. Such, for instance, are *Helianthus Golden Glow* and *H. Miss Mellish*. By topping the shoots at different times side growths are produced, the plants are dwarfer and the period of flowering is considerably extended. Some of the Michaelmas Daisies, if pegged down, are completely dwarfed, and such as *Aster acris* throw out innumerable flowering sprays which cover the layered stems.

Pegging.—This is as essential for some plants as staking is for others. Most of the pegs I use—and in some years there are thousands—are made of Bracken cut into suitable lengths, which are bent in the middle and both ends thrust into the ground. Next to this, Snowberry, used in the same way, makes the best peg, and is used largely for Dahlias, most of which have the shoots pegged down to dwarf the plants. Verbenas, Petunias, *Koniga variegata* and Ivy-leaved Pelargoniums are others which are always pegged down, but a number of plants are occasionally treated in the same way.

R. P. BROTHERSTON.
Tynningham, Prestonkirk, N.B.

THE DAFFODIL SEASON OF 1912.

ONE of the many pleasures of a gardener's life is to find a congenial soul and spend a few hours in his company talking "shop" and comparing notes. It was a happy inspiration of Mr. Robert Sydenham to allow us Daffodil people to pass the evening doing this after enjoying all the good things of his Birmingham dinner. The informal talk that takes place then is one of the pleasures we look forward to when we visit the "Midland," and such is the cast of the host's spacious net that somehow or another everyone who is "who's who" in Daffodildom finds himself in its meshes. This present year the subject chosen was "The Vagaries of the Season," and our worthy president (the Rev. G. H. Engleheart) "kicked off" with one of his typical little speeches veined with serio-comicality and deep understanding. For the past twelve months, he said, we have had our weather in "big chunks"—drought and burning sun, cold and damp, then more dryness and heat—the upshot of it all being that this season "takes the cake for eccentricity."

AS THE GARDEN is one of those papers which are honoured by being kept and bound, I have asked the Editor's permission for a considerable space to record all that I have been able to find out about the season of 1912. It is an historical one, and it must needs be passed down to posterity like "the hungry forties," to tell our spiritual children what their forefathers then passed through. My notes are mainly founded on my own personal observation; but it will be seen that in several cases I have drawn upon the experiences of others, communicated either verbally or by letter.

Its Earliness.—"Coming events cast their shadows before." I was very surprised at the time—but I am not now—to get a letter from the old veteran of Ard-Cairn, Cork, quite early in the year to say that he had cut a Daffodil bloom from the open on January 16, which, in his long experience, was a record. He evidently thought I might think it one of his Irish tales, so phenomenal was it, so he sent me the flower itself to preclude any possibility of doubt. I am sorry to say I have not kept a many years' list of openings myself, but I am able to give Alert. This year its date was March 6; last year it was March 25. Perhaps as striking an instance as any that I can mention is the experience of Mr. T. Batson of Beaworthy, North Devon. He is a keen hybridist, and he puts all manner of details in his pocket-book every season. This year he began to cross on March 12; in the six previous ones his earliest date was April 8. Lastly, we have the Midland Show. Never before has it been too late for Pearson. Hardly ever, if ever, has Milner been able to stage. And, speaking of myself, my late garden has given me this year the time of my life at Birmingham. Two factors seem to fully account for this extraordinary precocity: first, the unwonted early ripening of the bulbs in 1911; and, secondly, the mild spring of 1912, when not only had we warm days for weeks together, but also almost an entire absence of frost at night-time.

The Behaviour of the Plants.—As everyone anticipated, we suffered from our unwelcome visitors of the past year. The merodon, the Daffodil fly, was then very much in evidence,

visiting gardens where he had never been before and certainly not neglecting his old haunts, in both cases leaving unpleasant reminders of his visits. So, too, was Mr. *Fusarium bulbigenum*, after a very long absence, enticed by the great warmth of the summer; he made one of his few and far between calls, and he, too, did not forget to let us know he had been. Bulb-growers suffered severely last autumn from both of these causes. Hundreds of Mme. de Graaff and *Horsfieldii* had to be thrown away. In my own case some imported *Barrii* conspicuus and some English-grown Mme. de Graaff were the special sufferers from the fungus, but I could see traces of it in the planted bulbs. Some newly-bought *Venus* and some home-grown *Jaune à Merveille* were the worst, but I traced it in a few other kinds—just odd bulbs. The Rev. T. Buncombe sent me foliage of one of his Poets which prematurely turned yellow and then went brown; and I had letters from Mr. W. F. M. Copeland, Mr. Ormston Pease and others telling of similar experiences. Quite lately I have been wondering if all this was not the result of *Fusarium*. The appearance of the foliage and the bulbs of my own *Jaune à Merveille* have suggested the idea. With regard to the merodon, it seemed to pick and choose its varieties. Doris was very bad here, and there were one or two others to which it paid too much attention. I have an idea that it goes most of all where the flowers are left on and not gathered. I must have many hundreds of thousands of bulbs, and each year every one is taken up and cleaned, so that it is fairly easy to detect the merodon. We possibly might find an odd one or two in an ordinary autumn, but it was different last time. This visitation was universal. Growers who had never had it before had it then, and all over Britain grub-containing bulbs must have been planted; and we see, or do not see, the results now in blanks or wretched leafage. Yellow stripe has been unusually prevalent. It has appeared in gardens which previously knew it not, and on varieties which heretofore were thought to be immune. I cannot say I expected it, but I ought to have done. Poor things! the cold, water-logged soil in which everywhere bulbs had to pass the winter and the early weeks of spring quite account for it. I for one do not think it is infectious. It is only a sign that they have to live in a soil or an atmosphere which they do not like. Environment affects bulbs as it does human beings. Another noticeable feature which occurred in practically more or less every variety was the non-bursting of the enveloping sheath of the leaves. It hung on till they were ever so high, and my men had to spend a very considerable time liberating them. The effect was distorted and brittle foliage, giving the plants an untidy look. I wonder what caused it—the membrane of the sheath being too strong or the leaves being weaker than usual. I am inclined to think it must have been the latter cause, for flower-stems were unusually floppy this year. Instead of holding themselves rigid and upright, many bore their flowers in a graceful curve, like the bells on springs which we fasten to our doors and shutters when nocturnal visitors are believed to be in the neighbourhood. A last feature to be mentioned is the abnormal splitting up of bulbs, especially in certain varieties that are addicted to it. When such things as *Lucifer* and *Seagull* were lifted last season, the increase was noticed to be quite abnormal. In some varieties it was not so obvious as in others, but when we came to the leaf period of the present year, both under glass and in the open, every now

and again we saw a great number of narrow, puny-looking leaves some clustering round a fairly normal plant, others all by themselves. What is the meaning of this? Is it a suggestion of Nature? I mean, is there any correlation between this and the usual behaviour of bulbs in the difference which a hotter and lighter and a cooler and heavier soil makes to their increase? Naturally, the flowers from the much-divided-up bulbs were either fewer in number (*Lucifer*) or smaller in size (*Seagull*).

JOSEPH JACOB.

(To be continued.)

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Miltonia vexillaria Snowflake.—A pure snow white *Miltonia* with just a faint tint of yellow in the centre. The individual flowers were about four inches across, with an average of six to each spike. The plant in question carried thirteen spikes, and so admirably had it been grown that it was also awarded a cultural commendation. Shown by Lieutenant-Colonel Sir George Holford, K.C.V.O.

Elæocarpus reticulatus.—This is one of the most ornamental of a small yet beautiful genus of greenhouse flowering evergreen shrubs, and one that should prove of much value for the cool conservatory or like place. The small examples shown were 2 feet or so in height, bushy and freely branched, and flowering practically from base to summit. The branches extend in a sub-erect manner, and from their under sides depend graceful racemes of deeply-fringed flowers a third less in size than *Deutzia gracilis*, and borne with a freedom and profuseness akin to that well-known plant. The flowers are white, and have the hard, crisp touch of some of the Everlastings. This charming plant is not new, and is one of the many delightful subjects of which Messrs. Veitch appear to be the only present-day guardians. Not for a long time have we seen anything more distinctly beautiful than this pretty plant. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

AWARDS OF MERIT.

Delphinium Dusky Monarch.—The colour is violet purple; the individual flowers are large and with a dark centre; the spike very handsome and well formed. From Messrs. Kelway and Son, Langport.

Carnation Queen Mary.—This is the handsome and powerfully fragrant *Carnation* selected by Her Majesty the Queen at the time of the Coronation last year from a basket of seedling varieties grown and supplied by the raiser, Mr. Blick. In the matter of fragrance the variety is a revelation, and probably quite unique. It is a seedling, through several generations, of the highly-popular *Lady Hermione*, and, like it, a plant of great vigour and freedom. The colour is salmon rose.

Carnation Attraction.—A snow white variety of great purity of tone and splendid petal quality. This handsome variety has perfectly symmetrical flowers, and should figure well on the exhibition board. These two fine novelties were exhibited by Mr. C. Blick, Warren Nurseries, Hayes, Kent.

Silene Hookeri.—Quite recently this delightful Californian alpine has again come into prominence after an absence of years. The flowers are large, with deeply-lacerated petals, which are coloured rose and striated with white. The plant is very dwarf; the leaves, and indeed the whole plant, is

covered with a downy pubescence. The flowering stems are decumbent or nearly so. Exhibited by Messrs. T. S. Ware, Limited, Feltham.

Wahlenbergia gentianoides.—A charming and graceful plant of 15 inches or so in height, and bearing a profusion of clear blue—almost Periwinkle blue—flowers of considerable size. We do not, however, see the applicability of the specific name employed, and the more so when, so far as is known, its origin is more or less uncertain. The new-comer is believed to be a seedling from *W. gracilis*, though in the form of its flowers it might not be inaptly compared to *Campanula Stevensii* or *C. abietina*. In any case, it is a delightful plant. Exhibited by Messrs. Piper and Son, Barnes, Surrey.

Pelargonium Champion.—A bedding variety, and a seedling from the well-known Raspail with all its good attributes of freedom, dwarfness and splendid truss and flowers. The colour is rose, with white centre. From Mr. Philip Ladds, Swanley Junction.

Gladiolus Rosina.—An early-flowering variety. The colour is pinkish blush, the lower petals being marked with a nearly kidney-shaped, scarlet-outlined blotch. It is both distinct and pretty. From Mr. Bramfield, La Fone, Guernsey.

Sweet Pea Lavender George Herbert.—The stems are nearly all four-flowered, the colour bluish lavender. The stock is said to be quite fixed. It is a very handsome variety.

Sweet Pea Thomas Stevenson.—Certainly one of the brightest and best orange scarlet varieties extant.

Sweet Pea May Campbell.—The ground colour is cream, standards marbled with carmine, and wings slightly veined with the same colour. These three excellent varieties were shown by Messrs. Dobbie and Co., Edinburgh.

Carnation Margaret Lennox.—An ideal yellow-ground Carnation in every way. The ground colour is of a rich, deep tone, the perfectly smooth, finely-proportioned petals being heavily bordered with true scarlet. The contrast is very fine and fixes the attention at once. A very handsome and distinct variety. Shown by Mr. James Douglas, Great Bookham, Surrey.

Odontoglossum lambeauianum Princess Mary. A lovely ivory white variety, with slightly incurved petals and sepals. The chocolate brown markings on the lip serve to show the flowers off to advantage. One peculiar feature of the plant is in the fact that each flower has one dark spot on each of its petals. Shown by H. S. Goodson, Esq.

Lælio-Cattleya Aphrodite Cowan's variety.—A handsome variety of medium size and splendid form. The perianth is a very pale pink, almost white, and the lip is distinctly marked with crimson-purple. Parentage: *Lælia purpurata* × *Cattleya Mendelii*. Shown by the Liverpool Orchid and Nursery Company.

Odontoglossum Thais Glebe variety.—A magnificent variety, with densely-spotted flowers borne on a robust and branching spike. The flowers are blotched with purple maroon on a light ground. Shown by C. Phillips, Esq., Sevenoaks.

Dendrobium Goldii.—A charming species, native of Australia. The bright reddish purple flowers are borne in terminal spikes. Shown by Messrs. Sander and Sons.

The foregoing plants were shown before the Royal Horticultural Society on June 4, when the awards were made.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

CANTERBURY BELLS FOR INSPECTION (W. T. J. H.).—Canterbury Bells frequently go off at the collar in rich soil when damp or frost damages them and allows the fungi, which abound in such soil, to get a footing.

INJURY TO SWEET PEAS (Mrs. H. A. S.).—The Sweet Peas are attacked by the fungus *Thielavia basicola*, which has done so much damage to these plants in recent years. Usually the plants are attacked after they have been weakened by some cause, such as lack of drainage. It would be well to give them a little potash and superphosphate when watering. The Phloxes are attacked by the stem eelworm. There is no cure; but plants should be propagated only from unaffected portions of the old ones, and they should be grown on new ground. Dressing the soil with wood-ashes or sulphate of potash sometimes effects a riddance of the pest.

DRYING OFF DAFFODILS AND TULIPS (M. C. L.).—You might lift the bulbs quite early in July, lay them thinly in open shallow boxes, or place them in thin heaps, i.e., layers, in an open airy shed or outhouse. A quite open position in full sun would be bad for them, though in a shady place it would do for a time. If you have no outhouse, shed or similar place, spare frame-lights might be so set on large flower-pots as to form a covering to throw off wet, and, the sides being open and the top shaded, the bulbs would be safe enough for a time if turned over now and then. If the bulbs are named varieties, your better plan would be to place them in shallow boxes so as to keep each sort separate. The Daffodils could be planted in August, the Tulips in September or even later.

EREMURUS ROBUSTUS (E. M. L.).—If you do not wish the plants to mature seeds, you might remove the flowering portion of the inflorescence (spike) as soon as the flowers have faded. The lower part might remain for a time with impunity, or you may remove it altogether, cutting it away 6 inches or so from the ground-level, just as you desire. What is of far greater importance is that you endeavour to develop and retain the leaf-growth to its fullest extent, and, by building up a crown-bud of the largest size, ensure a good flowering another year. That would best be accomplished by a mulching of short manure, or frequent waterings of liquid manure, or even clear water in the event of very dry weather. If the plants have only recently been installed in their position, and you are endeavouring to cultivate them in your town garden, a liberal treatment should be meted out to them, taking care that, among other things, no planting be done within a yard or so of the plants.

TREES AND SHRUBS.

YEWS IN HEDGE DYING (J. G.).—It is probable that your Yews have suffered from drought, though it is impossible to be certain without seeing the plants; certainly it is some root trouble. There is no trace of any fungoid disease about the shoot sent. It would be a good plan to get some local expert to examine the plants and their roots.

DEAD LILAC SHOOTS FOR EXAMINATION (G. S.).—The Lilac shoots were submitted to a mycologist, but he was unable to find any trace of fungus or anything else which would be likely to cause their death. It is possible that the young shoots were injured by cold, or some fungus may have injured the branches below the places from which the shoots were taken. If you find any fungoid growths on the lower parts of the branches and forward us samples, we will have a further examination made. The specimen sent for name is *Lonicera alpigena*.

RHODODENDRONS (Viola).—It is not possible to say, within two or three years, how long it will take Rhododendrons grown from seeds to flower, for much depends upon the kind of ground the plants are growing in and the kind of Rhododendrons. Some of the small-growing roots bloom when about four years old, while the strong-growing kinds rarely bloom under five or six years of age, and many do not flower until they are ten or twelve years old. By cutting the plants back you may induce earlier flowering. It is probable that ants will injure some of your more delicate plants. Ballikrain Ant Destroyer, obtainable from Messrs. Alexander Cross and Sons, Limited, 19, Hope Street, Glasgow, will kill these.

DISEASED ALMOND LEAVES FOR EXAMINATION (No Name).—The leaves sent for examination were infested with the disease known under the common name of Peach leaf-curl. This disease often attacks both Peach and Almond trees, doing serious injury. The condition is due to the presence of a fungus, *Exoascus deformans*. The most satisfactory way of dealing with it is to remove and burn all young shoots which bear deformed leaves. If this is not done, the disease will spread indefinitely. Some good may also be done by spraying the trees with Bordeaux mixture as the buds begin to burst in spring.

MISCELLANEOUS.

A REMARKABLE BEETLE (Hafod).—The larva is that of the "bloody-nosed beetle," so called from the drop of red liquid usually present at the tip of the snout of the fat violet black beetle into which it turns. It is in no way injurious to garden plants.

DANDELIONS ON A LAWN (Captain G. H.).—The only way to kill Dandelions on a lawn is to pull them up by the roots. Various means have been tried for killing them without pulling up the roots, such as dressing with salt and sulphuric acid; but they have only killed the crowns, and fresh heads have been formed from dormant buds. By chopping the heads off as they appear, you may gradually weaken them and eventually kill them outright; but it is a long and tedious job. We prefer pulling them up, even when the ground has to be loosened with a fork to enable the full length of a root to be extracted.

NAMES OF PLANTS.—*K. M.*—*Viburnum plicatum*. *Neillia opulifolia lutea*, *Syringa Bretschneideri* and *Deutzia crenata* variety.—*Dr. P.*, *Axminster*.—*Lilium pyrenaicum*. The Honeysuckles are both varieties of the common one, *Lonicera Periclymenum*.—*A. D.*—*Muscari comosum plumosum*.—*Miss S.*, *Devon*.—*Stachys lanata* (woolly) (*Labiatae*) and *Polygala myrtifolia* (purple) (*grandiflora*) (*Polygalaceae*).—*F. I. K.*, *Slough*.—*Campanula portenschlagiana*.—*A. C.*, *Cirencester*.—*Ligustrum japonicum*.—*Docken House*.—*Fraxinus Ornus* (*Manna Ash*) and *Muscari comosum plumosum*.—*L. B.*—*Orchis ustulata*.—*F. Lurani*.—*Sedum Cepaea*.—*J. E.*—*Clarkia elegans flore pleno*.—*C. O.*—*Crataegus Pyracantha*.—*Mrs. T. W. C.*, *Taunton*.—1, *Geranium Endresi*; 2, *G. phæum*.—*Slack*, *Windrum*.—7, *Vicia hirsuta*; 8, *Lilium pyrenaicum*; 9, *Cardamine flexuosa*; 10, *C. pratensis*; 11, *Sisymbrium Alliaria*.—*Mrs. B.*, *Norfolk*.—A 1 and C 12, forms of *Iris pallida*; A 3, 1, *pallida* Queen of May; B 5 and B 8, *I. squalens*; C 10, 1, *Mrs. Darwin*; A 4, B 6 and C 13, forms of *Iris amena*; B 7, C 9, C 11 and A 2, forms of *Iris variegata*.—*J. S.*, *Wilton*.—1, *Pulmonaria officinalis*; 2, *Polygonum Bistorta*; 3, *Lychnis dioica*; 4, *Sanicula europaea*; 5, *Ajuga reptans*.—*A. Bassett*.—1, *Paulownia imperialis*; 2, *Kalmia glauca*; 3, *Populus tremula*; 4, *Pieris floribunda*; 5, *Amelanchier canadensis*; 6, *Passiflora* species (?); 7, *Sequoia gigantea*.

SOCIETIES.

BOURNEMOUTH GARDENERS' EVENING VISIT TO ASHTON COURT.

ON Tuesday, June 4, the members of the above society visited the gardens of Ashton Court, Branksome Park, by the kind invitation of J. J. Norton, Esq. Although rain—welcome rain—fell rather heavily during a part of the evening, it did not in the least spoil the pleasure of the visit. Both Mr. Norton and his able gardener, Mr. Charles Nippard, gave the members a kindly welcome, and at once conducted them through the houses, in which Zonal Pelargoniums, Gloxinias, tuberous Begonias and winter-flowering Carnations are largely grown, also Roses and fine specimens of Indian Azaleas in pots. Tomatoes, Winter Beauty and Satisfaction were fruiting well in pots. Chrysanthemums looked well, these being grown in batches for the production of cut flowers and large blooms. The fine rows of Sweet Peas were commencing to flower, and gave every promise of proving very satisfactory. Bush and pyramid Apple and Pear trees were well laden with fruits, and showed clearly how successfully these fruits could be grown in a naturally light soil when properly managed. Hybrid Rhododendrons form the chief feature of these gardens. There are several thousands of plants in the best possible health and well laden with huge heads of blossoms, also many hundreds of varieties which constitute the finest private collection in the country. Recent additions are Mme. Albert Moser, Fritz Benary, Mlle. Jeanne Bois, Lady Mosley and Auguste Lemaire. Pine trees rise from the large beds of Rhododendrons and are studded about on the lawn. Climbing Roses are trained on the bare trunks, and also on the stems of standard fruit trees growing among the Rhododendrons. Standard Roses and spring-flowering shrubs are also associated with the Rhododendrons. The Indian and mollis Azaleas were over, but the plants looked well. The golden Retinospora is used here as an edging to the shrubbery beds, and it looks very well. Tall standards of climbing Roses, supported by strong Bamboo canes, were grouped on the lawn. Rose American Pillar was flourishing on the walls of the mansion. The members passed a very hearty vote of thanks to Mr. Norton and his gardener before leaving these beautiful gardens.

* * * The Yearly Subscription to THE GARDEN is: Inland; 3s. 6d.; Foreign, 8s. 9d.

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THE GARDEN

A WEEKLY
ILLUSTRATED JOURNAL FOR GARDEN
ORCHARD AND WOODLAND

SATURDAY,

JUNE 22, 1912.

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HYBRID TEA ROSE.

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T. W. Hanshaw, Esq., Anerley, London, writes, May 16th, 1912:—"Enclosed is cheque and order for further supply of Lilies, etc. I think it is fair to compliment you on the splendid condition of the bulbs and plants when received, and at the same time to say a word of praise with regard to the manner in which they were packed, it cannot be improved upon I am sure. It may interest you to know that my gardener says 'the plants and bulbs I get from Priory House are always miles ahead of those which I order elsewhere.'"

The above original letter can be seen in my office, and thousands of similar ones, gained by sheer merit and superlative value. WHAT MORE CAN BE SAID OF ANY PLANTS

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Read what Mr. LEIGHTON, Kilmarnock, says about this glorious plant:—"I am delighted to tell you how beautiful the Brugmansia has been in the greenhouse. During spring it flowered abundantly, having 27 blossoms out at one time. Then I put it outdoors for the summer, where it has been blooming all the time, and had 30 blossoms out at once." Mrs. SEYMOUR, Maidstone, writes, May 9:—"Please send me another 5/- Brugmansia. The one I had last year was most successful in the garden, and simply magnificent."

FOR OTHER BARGAINS SEE PAGE III LAST WEEK.

EVERYTHING PACKED FREE AND CARRIAGE PAID.

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CACTUS DAHLIAS.—A grand lot of plants, in choicest variety, lovely colours, grown from very best named varieties, not seedlings, which are worthless compared with these strong, well-rooted plants; all colours, mixed. Bargain price, 6 for 1/-; 12 for 2/-; 25 for 3/6.

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CAMPANULUS ISOPHYLLA.—Beautiful dwarf trailing species, with large salver-shaped flowers; splendid for suspended pots, etc., forming hanging streamers of lovely white flowers 3ft. to 4ft. long, doubtless the queen of hanging basket plants. Equally good for in or outdoors. 4 for 1/3; 8 for 2/-; 12 for 3/-.

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THE GARDEN.

No. 2118.—VOL. LXXVI.

JUNE 22, 1912.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

*The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.*

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Holyrood Palace Gardens.—By command of the King, the gardens of the Royal Palace of Holyrood, Edinburgh, are again to be open to the public on the Mondays of the summer months. They were open on Monday, June 17, and this will be continued till the end of September, the hours being from two o'clock till five o'clock. The privilege has been largely taken advantage of in former years, and the gardens, which are under the care of Mr. Smith, are now looking well for the season.

A Good Early Pea.—A culinary Pea that has given a good deal of satisfaction this year is Carter's Eight Weeks. Sown in the open garden on February 15, and given only ordinary treatment, pods were ready for picking on June 5. A row 6 yards long has already yielded two pecks of well-filled pods, and at least another peck will be gathered before this note appears. The pods are of good size, and in nearly every instance are borne in pairs. The quality, too, is excellent, and we regard it as an early Pea of considerable merit and worthy of extended cultivation.

Variation in Sweet Peas.—Mr. Cuthbertson recently brought examples of Sweet Peas before the scientific committee of the Royal Horticultural Society which he thought showed reversion to original forms. In the white waved variety (Etta Dyke), in the waved cream variety (Dobbie's Cream), and in the pink and white bicolor (Mrs. Cuthbertson) he had found a deep purple-flowered plant—one in a thousand, perhaps—giving a colour approaching that of the wild Sweet Pea, but retaining the waved formation. Mr. Cuthbertson also showed Sweet Pea leaves with some of the tendrils becoming leafy, the result possibly of high cultivation.

Primula Unique.—This is a charming Primula derived from intercrossing the two well-known Chinese species pulverulenta and cockburniana. The cross has been made both ways, and there is scarcely any difference between the seedlings, excepting when pulverulenta was the mother plant; then an occasional seedling had slightly darker flowers. It is fairly intermediate in character, but it retains the perennial habit of pulverulenta and a certain amount of its vigour, while the orange colour of cockburniana is reproduced in no small measure. The result, so far as colour is concerned, is a pleasing rosy red, and quite distinct from any other hardy Primula in cultivation. A similar plant known as the Lissadell hybrid has been raised from the same parents. The best effect is produced when a batch of about a dozen plants are arranged together. A shady, moist spot should be chosen, but where it is not too wet during the winter months, for a great many Primulas die from this

cause. P. Unique was originally raised by Messrs. Veitch of Chelsea; but since then Messrs. Bees, Limited, and other firms have taken it up, and now strong examples can be bought for a small sum.

Sir Alexander Cross, Bart.—The honour that has recently been conferred upon Mr. Alexander Cross of Glasgow is received with gratification throughout the horticultural trade. The new baronet is the senior partner in Messrs. Alexander Cross and Sons, the well-known chemical manufacturers, who have placed on the market insecticides of great horticultural value. Apart from a successful business career, Sir Alexander gained prominence as a politician, representing the Camlachie Division of Glasgow for eighteen years, retiring in 1910.

Lieutenant-Colonel Sir David Prain.—The announcement of the honour of knighthood recently conferred upon Lieutenant-Colonel D. Prain, F.R.S., will be received with feelings of the greatest pleasure by his many friends both at home and abroad. Sir David Prain is an ardent botanist and horticulturist. He was formerly Superintendent of the Calcutta Botanic Gardens and Director of the Botanical Survey of India. His publications of the botany of India are numerous and critical. Since 1905 he has been Director of the Royal Botanic Gardens, Kew.

A Rare Calceolaria.—There is flowering in the Temperate House at Kew a remarkably distinct and rare Chilean species named Calceolaria cana. When not in flower the growth and appearance of the plant are suggestive of a Stachys rather than of a Calceolaria, for it is only some three inches in height, with short, white, densely woolly leaves. The flowers are borne on slender scapes 1 foot to 15 inches in height. The colour of the small blossoms is pale purple or rose on a white ground, with darker purple blotches and yellow markings in the throat. A feature of Calceolaria cana is the delicious Violet fragrance of the blossoms.

Dipteronia sinensis.—This is a deciduous bush or small tree recently introduced from Central China by Mr. E. H. Wilson. Dipteronia is a monotypic genus nearly allied to the Acer or Maple family. A bush some eight feet in height is at present flowering for the first time near the Refreshment Pavilion at Kew. The small greenish white flowers are freely borne on pyramidal panicles. These, however, are of no decorative value, the beauty of the plant for garden purposes being the highly-ornamental foliage. The largest of the pinnate leaves exceed a foot in length, and are about four inches to five inches wide. The leaflets are usually eleven or thirteen in number on mature specimens. Cuttings root freely made of half-matured growths in July and August, while layering also forms a ready means of propagation.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Choisya ternata.—With regard to the correspondence at present going on in *THE GARDEN* re the hardiness or otherwise of *Choisya ternata* in different parts of the United Kingdom, I beg to say that in one of our shrubberies here it has been planted for more than ten years and has never been injured even with 26° of frost, while *Olearia Haastii* has been killed to the ground. I may say that neither has had any protection. — JAMES HARVEY, *Mortonhall Gardens, Liberton, Midlothian.*

A New and Noteworthy Rose.—Of all the new Roses of recent introduction, may I claim the privilege of stating *Sunburst* to be one of the most beautiful? It is a good grower, of rather dwarf habit, but carrying its blooms on substantial purple stems; the foliage as described in Messrs. Pernet-Ducher's catalogue is lovely; also the coloured illustration in the same of the blooms is "most truthful," but not quite up to the transparency of the orange and cadmium. I have just cut a lovely specimen from a plant growing in the open, and can only say I leave the popularity of this beautiful variety of Hybrid Tea to the admirer of the elegant, strong and free-blooming Rose. — CHARLES W. CROSBY, *Dorking.*

Lapagerias in the Open Air.—These plants are beautiful greenhouse climbers, and specially adapted for growing in houses with north, north-east, or north-west aspects and in positions where their wiry branches can be trained to wires under the roof glass or immediately over a path. A number of years ago, a gardener of my acquaintance planted several in a cosy corner facing the south in the open air, and trained the shoots to the walls of the mansion. The plants survived three ordinary winters without any protection and flowered the third year. I have not heard anything about them since, and would like to learn whether any of your numerous readers or contributors have had any experience with these plants as wall climbers outside. I am of the opinion that in southern counties, and with light winter protection, *Lapageria rosea* and *L. alba* may be so grown.—B. [Quite recently we noticed *Lapageria rosea* growing with remarkable freedom in the open in Mr. J. C. Eno's garden at Wood Hall, Dulwich. There is no doubt that this beautiful climber is much hardier than is generally supposed.—ED.]

Rhododendrons.—On page 297, issue June 8, "Spartan" has some very interesting remarks relative to the soil suitable for the growth of these plants. I have had to deal with the cultivation of many *Rhododendrons* covering acres of ground both in northern and southern counties—chiefly in the latter—and have found them thrive well in various kinds of loam. I do not believe in putting much peat around the roots; in very dry summers the whole mass gets extremely dry, and then the lower leaves on the stems fall off in showers. Some of the best specimens I have seen were grown in sand, shingle and poor loam, with a very small amount of peat. Annual surface mulches did a lot of good in this case. In one garden in Lancashire there was a natural rockery, and *Rhododendrons* grew well among the rocks, their roots entering the crevices and permeating the thin crust of soil on the surface. The plants certainly do not like lime nor very strong clay.

They live even in the latter, but do not carry many old leaves. All soils should be deeply trenched for the plants, although they are mostly surface-rooting. Rotted cow-manure, one-half, and rough fibrous loam, one-half, form the best compost for annual top-dressings.—G. G.

A Useful Speedwell.—Under this heading you have a paragraph in your issue of February 10, in which you speak of *Veronica cupressoides* as a low-growing shrub. This is an error, but is one which is shared by many nurserymen, as is evidenced by their catalogues. The paragraph states that "it is probably as frequently met with as *V. salicornioides* as under its correct name, but there can be no doubt of the proper one." I quite agree with the last statement, but the correct name is *V. salicornioides*. Cheesman, in the "Manual of the New Zealand Flora," describes *V. cupressoides* as "a much and closely-branched,



LIEUTENANT-COLONEL SIR DAVID PRAIN, F.R.S.,
DIRECTOR OF THE ROYAL BOTANIC GARDENS, KEW.

(See preceding page.)

round-topped shrub 3—6 feet high." *V. salicornioides* he describes as "a small, much-branched shrub 1—3 feet high." I have both shrubs in my garden, and know them well. The appearance is somewhat similar, but *V. cupressoides* is a deeper shade of green, lacking the yellowish tinge which is present in *V. salicornioides*. Strange to say, I have never seen a well-grown specimen of *V. cupressoides* in cultivation, as when planted near other shrubs they become leggy, but I have seen them growing in the shingly bed of some mountain stream, of perfect shape, forming round, green mounds suggestive of haystacks, as neat and regular as though they had been trimmed with a gardener's shears. From the localities in which it grew naturally, *V. cupressoides* should be hardy in England; but I would advise anyone growing it to plant it on a lawn or somewhere away from other shrubs or strong-growing plants, so that it could assume its beautiful natural shape. I had noticed the error some time ago, which your paragraph

authoritatively confirmed; hence these lines.—A. BATHGATE, *Dunedin, N.Z.*

The Naming of Roses.—I quite agree with Mr. Easlea in his protest against our American cousins re-naming well-known Roses, and also that the practice should be condemned by all responsible Rose-lovers. I know well the confusion that arose when Mrs. W. J. Grant was re-christened *Belle Siebrecht*, but in this case the Rose was purchased and disseminated by Messrs. Siebrecht and Wadly, and, of course, they had the right of re-naming it. But in the case of old-established favourites, such as *Antoine Rivoire* to be named Mrs. Taft seems to me to be carrying the thing too far. I can remember a Rose being sent out in America some years ago named *American Banner*. Supposing we over here had copied our American cousins and called it *Union Jack*, why, there would have been quite an uproar. I wonder what our genial friend, Mr. E. G. Hill, would have said if we had re-named his beautiful seedling Mrs. Theodore Roosevelt and called it, say, Mrs. John Burns. I hope that, as *THE GARDEN* has a wide circulation in America, a friendly protest from a Rose-lover on this side may have some practical result in putting a stop to such re-naming alluded to. We do not mind how many good Roses Americans raise and name, especially if of the quality of *Richmond*, *Reliance* and *Radiance*; but please, Brother Jonathan, do not claim the right to re-christen British, French or German novelties.—ROSARIAN.

Curious Laburnums.—There are at present in the gardens of Lees, Coldstream, two unusual specimens of *Laburnum* which were purchased abroad some twelve years ago. The shrubs are about eighteen feet to twenty feet high, and are profusely decorated with long pendulous sprays, similar to ordinary *Laburnum*, of a pale shrimp pink colour. But mingled with these, at quite capricious intervals, the ordinary yellow blossom is seen, sometimes in single sprays, occasionally appearing as two or three yellow flowers on a pink spray, and on two occasions a single bloom has been found, half of which is pink, the other half being yellow; while more remarkable still, occasional bunches are seen totally different in every respect to the other two. They are exactly the colour of the ordinary *Wistaria*, but grow in a dissimilar manner to either *Wistaria* or *Laburnum*. At the end of a year or two these bunches appear to die off (several of those previously noticed having done so), but on other parts of the trees they have made their appearance, though never so numerous or vigorous as at present.—X. [The *Laburnum* referred to is a fairly well-known kind, and is correctly named *L. Adamii*. A graft hybrid between *Laburnum vulgare* and *Cytisus purpureus*; it was raised upwards of half a century ago by a French nurseryman near Paris. The habit has been practised for many years of grafting *Cytisus purpureus* upon stocks of *Laburnum vulgare*, and in one instance the peculiarity of purple and yellow *Laburnum* blossoms and tufts of *Cytisus purpureus* occurred as a freak on the grafted stem. This freak, known to scientists as a graft hybrid, was perpetuated by grafting, and was the original parent of all the trees bearing the three kinds of flowers which are now to be found. An illustrated article on graft hybrids between the Medlar and Hawthorn appeared in *THE GARDEN* for July 1, 1911, such hybrids are not common, although there are several well-authenticated instances. There are several fine examples of *L. Adamii* in the gardens of Syon House, Brentford.—ED.]

Rose Tea Rambler.—This fine old Rose, sent out by Paul and Son in 1903, is flowering with more than usual freedom this season, and presents at the time of writing a picture of most refined beauty, the richly-coloured salmon pink flowers having their beauty accentuated by the bronze green tinted foliage. It is an ideal climbing garden Rose, valuable alike for pergola, archway or wall. The growth is rampant, and strong canes frequently measure 8 feet to 10 feet, many of which spring directly from the base of the plant, so that little difficulty is ever experienced in keeping the plant in full vigour, and when well furnished with wood of this character, the resulting floral display is invariably great. Rose Tea Rambler belongs to the Polyantha group of climbing Roses, the flowers being borne in large clusters, and, being thinly disposed, the effect when in flower is light and graceful. It flowers during the end of May and early June, and again sparingly in autumn.—T. S.

Rosa gigantea.—Of the many attractions at Kew during the past month, one which was of special interest to a large number of visitors was the flowering of this giant Rose, as only on very rare occasions has it flowered in this country. This species was introduced from Upper Burmah by Sir Henry Collett in 1889, and ever since its introduction plants have been cultivated at Kew under various conditions; but it was not until the spring of 1910 that it flowered, when the plant in the Himalayan House produced four flowers. Again, in 1911 eight flowers opened. This spring, however, the plant flowered profusely. This, no doubt, may be attributed to the hot summer experienced last year, which enabled the wood to become thoroughly ripened. Planted out in a border and trained to one of the rafters of the house, the plant has attained a height of 45 feet, while the stem is about five inches in diameter at the base. The flowers are from 4 inches to 5 inches in diameter, of a deep buff colour in the bud stage, changing to pure white as the flower expands; the stamens are bright yellow. This Rose should not be pruned hard back, but merely have the strong, soft shoots cut out, leaving the more twiggy growths, as it is on these that the flowers are produced. *R. gigantea* is a vigorous grower, and in its native habitat grows to the top of the large forest trees, often reaching a height of 60 feet to 80 feet. Although regarded as tender, I believe this Rose would thrive in such places as South-West Cornwall and the South of Ireland.—W. T.

Exhibiting Daffodils.—I was interested to see the letter from Miss Currey in *THE GARDEN*, page 250. I have always admired Miss Currey's tastefully-arranged exhibits of Daffodils, fine flowers shown with long stems, looking as fresh as the proverbial Daisies, in spite of the long railway journey and the trip across the Irish Channel; but when she pleads for the paper collar as a harmless device and a panacea for sea-sickness and all the troubles of a prolonged railway journey, I hope we are not to conclude that she wishes us to believe that without the collars her flowers could not be shown in good condition, say, at the Vincent Square Hall; I should be sorry to think so! If several flowers of the same variety can be packed together without the need for paper collars, then surely the solitary bloom of the precious seedling can just as well travel among them as if it had been one of that variety; but my point is that these collars are used not so much to protect the flowers from injury in transit as to prevent the natural tendency of the perianth segments, in some varieties, from "reflexing." "Irritation" is not a strong enough

word to express my feelings in the matter. I have only too often seen flowers shown with these collars left on, because, if they had been taken off, the perianth segments would have reflexed so badly as to make the flower fit only for the rubbish-heap. At one of the leading shows this season I saw a flower which at once attracted my attention; it was "apparently" faultless in shape and had a perianth as flat and as round as a penny, suffused with a shade of colour I had never seen in a *Narcissus* perianth before—a delicate suspicion of apricot pink. I gazed in wonderment on this marvellous flower; so extraordinarily wonderful was it that my suspicions were aroused, and I took a peep behind the scenes to see how it was done. I found, as I expected, a neat, very neat, little disc of cardboard carefully placed up against the back of the perianth. This card was of just the correct depth of colour to show through the white perianth, and I can assure Miss Currey that this card served the double purpose of lending its colour to the

THE ROSE GARDEN.

THE PROSPECTS OF THE ROSE SEASON.

WITH many readers, by the time these lines are in print the Rose season will be almost in full blow; but I am aware *THE GARDEN* is widely circulated, and growers in the North have reason to rejoice that they live in those parts, especially if they are exhibitors. It is a remarkable year, one of which few can recall the equal. To see such a glare of blooms out the first week in June is to recall the times when one depended solely upon the old Gallicas and Hybrid Chinese. Most of us have received some very welcome showers, and now the buds will fill up well.

Amateurs from the Home Counties who depend solely on cut-backs will be sadly out



A FLOWERING SPRAY OF THE GIANT ROSE (MUCH REDUCED). IN ITS NATIVE HABITAT THIS ROSE GROWS TO A HEIGHT OF 60 FEET TO 80 FEET.

flower and supporting a refractory petal, which, directly it was removed, sprang back flat against the stem, leaving a very ugly hole in the side of the flower, and the imposture was revealed. If the Royal Horticultural Society or the Midland Daffodil Society would say that there was to be no more faking and no more paper collars, we might trust exhibitors in the same way that we trust them when we say that they are to show only flowers that they have grown themselves.—W. A. WATTS.

FORTHCOMING EVENTS.

June 25.—Royal Scottish Arboricultural Society's Excursion to Deeside (five days).

June 26.—Colchester Rose Show. National Rose Society's Show at Southampton. Richmond Flower Show. Royal Botanic Society's Meeting.

June 27.—Isle of Wight Rose Show at Ryde.

June 28.—Canterbury and Kent Rose Society's Show. Hertford Horticultural Show.

June 29.—Windsor Rose Show. Reigate Rose Show. Bradford Paxton Society's Meeting.

of it at the "National" on July 9, unless they were able to foretell the weather we have had and pinched out the first buds of the earliest kinds. I should say that the Southampton Show on June 26, and also Richmond and Colchester on the same date, will bring out remarkably good displays. We are now having the proverbial dripping June, and I should say we are likely to see the rich-coloured Roses in grand form. It may even be a year specially good for some of the older Hybrid Perpetuals, for I have seldom seen them looking better, and many of the semi-double kinds are coming out magnificently in the cooler, moist weather now prevailing.

Even the maiden plants are coming into bloom here in Essex, so that with another month before the greatest show of the year it is to be feared many will find the date too late for them, and I think it a very wise provision of the National Rose Society to establish a show like that at Southampton; only I wish it had been in London instead.

Those growers who were well ahead in providing stimulants will be rewarded now that the rains have come; but even now we can do much to help the buds by dusting the ground with a good artificial manure and hoeing it in. A season like this has demonstrated the error of depending solely upon liquid manure, for how can one water all one's Roses as they require it; whereas in a rainy season we can apply artificials and allow the rain to do the watering for us. I am a believer in putting the food into the land in the autumn, so that the winter and spring rains can carry it down for use by the roots when required.

I have had an object-lesson this season in what may be accomplished by very moderate pruning. Last season some hundreds of Roses in a garden close by were hard pruned. This year a new gardener arrived who believes in only moderate pruning, and there is, indeed, a glorious array of bloom. As I explained to the owner, this practice might do well in alternate years, but I would not advocate it annually, or we should find that basal growth would be very meagre. Again, the retaining of the early growths is somewhat risky, because far too frequently we have late frosts that spoil all our prospects. This year there was practically nothing to do any serious harm. The Roses I allude to are growing in specially-prepared beds, made two years ago. The soil was very light, made up chiefly of old turf, leaf-soil and rubbish from the soil-yard. A cesspool close by is cleaned out occasionally and pumped straight on to these beds, the result being growth I have never seen equalled. Many exhibitors who have a goodly number of the staying Roses, like Queen of Spain and Bessie Brown, will be very glad indeed, and I imagine it will be such Roses that will be very much to the front on July 9.

Although aphid has wrought havoc to neglected Roses, those who have sprayed early and continually have been able to keep their Roses in good trim. So far, black spot has not been very much about, which is something to rejoice over, because this pest is most annoying.

The need of a public Rose garden becomes more manifest every year. Our collection is now so prodigious that it is only by some such garden, where visitors could see for themselves the various Roses growing, that they are likely to satisfy themselves. Such a public Rose garden as that at Westcliff-on-Sea is a great boon and is worth a long journey to see, and I am glad to know it has been brought well up to date with the latest novelties.

Few new Roses have pleased me more than Reliance, Mr. E. G. Hill's fine seedling. It is like a huge White Lady, with very large guard petals and warm shell pink colouring inside and yellow shadings; in fact, it seems to be a blending of

White Lady, Mildred Grant and Melanie Soupert. It must surely take a great position as a show flower.

The wichuraiana Roses are now coming on fine and promise to be very effective this year. So also are the lovely little Polyanthas, and altogether, although an early one, the Rose season of 1912 will be one long to be remembered.

ROSE MARQUISE DE SINETY (H.T.).

[See coloured cover.]

This is without a doubt one of the grandest colours yet produced, and it is certain to remain a great favourite for many years to come, although there are rumours of rivals. An idea has got abroad that Marquise de Sinety is a poor grower, but this I am

fruit fragrance. I do not advise it to be grown as a standard, although it will grow in that form, but it is not so adapted to making a good head as other Hybrid Teas, such as Mme. Ravary. P.

[Our coloured cover was prepared from flowers kindly supplied by Messrs. Merryweather and Sons, Southwell, Notts.—ED.]

THE FLOWER GARDEN.

A KASHMIR POPPYWORT.

(MECONOPSIS SINUATA LATIFOLIA.)

For sheltered and shady corners, either in the rock garden or border, there is no more charming plant than the Meconopsis, of which there are several kinds well worth growing. For shady banks among Ferns, our native species, *M. cambrica*, is a most effective plant with its wealth of yellow flowers. In such positions it may be naturalised, and self-sown seedlings usually appear in abundance. Of all the members of this beautiful family it is the best, if not the only, perennial, all the others usually dying after they have flowered. The headquarters of this family is in the Himalayas; whence they extend along the mountain ranges into China. North America is represented in the genus by one species, which is found in California, an annual with beautiful brick red flowers. The most handsome member is the Satin Poppywort (*M. Wallichii*), which is well known in gardens with its 5-feet or 6-feet stems, covered on the lower portion with beautifully-cut leaves, and producing for the greater part of its length its branches of purplish blue flowers.

M. sinuata latifolia was introduced in 1906, seeds having been sent from Kashmir in the spring of that year. From a rosette of stalked, somewhat oblong leaves, with sinuate margins, arises the 2-feet stem, covered, like the leaves, with stiff, prickly hairs. When about a foot high the terminal flower, of a pale blue colour, opens, disclosing a bunch of orange-coloured stamens, in the centre of which is the ovary and purple style. After this the stem continues to elongate, and produces a succession of its beautiful flowers

on pendent stalks during the months of May and June.

A suitable companion to the above, of a similar habit, but with thinner and more deeply-lobed leaves and darker blue flowers, is *M. aculeata*. It also differs in having a rounder and shorter capsule. Another charming plant is *M. racemosa*, with long, narrow, entire leaves and deep blue flowers.

All the above plants may be successfully grown in a cool, shady place, planted in well-drained soil composed of loam with plenty of leaf-soil, as well



THE BEAUTIFUL POPPYWORT (*MECONOPSIS SINUATA LATIFOLIA*)
NATIVE OF KASHMIR.

glad to disprove, for it grows with me in heavy clay soil quite equal in vigour to Mme. Ravary, both on the hard-pruned plan. I have now growths of Marquise de Sinety fully 15 inches in length bearing grand buds, which, when they begin to show colour, are a carmine ochre colour, but as they expand they are a superb Roman ochre, shaded with bright rosy scarlet. The foliage is a most delightful reddish shade, very leathery and glossy, and of enormous size; indeed, the beauty of the foliage of this variety is only equalled by Joseph Hill. There is also a delicious ripe

as some peat to make it lighter and more spongy. Seeds must be fresh, and should be sown in pots in a cold frame or in a house with a little heat. The seedlings must be pricked off into pots or boxes as soon as they are large enough to handle. If pricked off into boxes first it will be advisable to pot them off later, as they are better planted out of pots into their permanent positions. W. I.

SWEET PEA NOTES.

Fresh Mulching.—It is not always either necessary or convenient to put down fresh mulching to the Sweet Peas; but in view of the dry weather of April and the early days of May, when artificial watering had to be done, an endeavour ought to be made to strain a point in its favour this year. For purposes of keeping the soil cool and preventing the waste of food, the old material is quite useful, provided that it is kept open and sweet by constant loosening, but it is not now giving much food. If, therefore, there is some good, rotten manure at command, spread a nice thickness after the worn-out stuff has been raked off. There can be no doubt that the plants will derive marked benefit from it in many ways before they have done blooming.

Variety in Food.—Feeding the plants will be under the most serious consideration now, and no efforts ought to be spared to afford variety. The constant application of one food to a human being does not produce the finest man or woman, for the simple reason that the body becomes satiated of the one thing given incessantly, and plants are sure to come into a somewhat similar, if not identical, state. To achieve the best reward, at least three kinds should be at disposal, and these may advantageously be applied alternately. However, it is obvious that this detail of management must be subject to the conveniences of each cultivator, who may be relied upon to do the best in his power for his plants. It is of the utmost importance that, no matter what form the feeding may take, it shall never be used when the soil is dry and never be applied strong.

Thrips.—Fortunately for the peace of mind of the majority of Sweet Pea lovers, this pest does not invariably attack the plants, because they would find in it a persistent enemy, which is by no means easy completely to exterminate when once it has made itself at home. Although it is not an occupant of or visitor to every garden, the grower should ever be on the look-out for it, so that the instant one is seen it can be destroyed. It will be found to attack, and very quickly cripple, the growing points of the shoots unless it is destroyed. The application of an approved insecticide, exercising the utmost discretion that it is not used in a strong state, is permissible, but vigorous hosing and hunting will suffice if steps are taken early enough.

Disbudding.—This will continue to have the most intelligent attention, as well as regards lateral growths as blooms. The severest form of bud suppression as adopted by those who are

growing for exhibition is neither necessary nor desirable in general culture, and each cultivator must proceed on the lines that he knows will best suit his particular objects and requirements. As a rule, it is not desired to have the plants in full bloom much before the middle of July, but the dates of fixtures must be closely watched and blossom buds all removed a definite number of days before them to secure superior quality. The time will depend on the situation of the garden and the season.

Evening Hosing.—When the day has been burning with the heat of the sun, and the atmosphere has become perfectly arid, evening hosing or syringing, according to circumstances and conveniences, must have consideration. It is seldom that real harm can be done, but obviously the incessant pouring of cold water upon the soil will reduce the temperature of the ground, and thus



A CHARMING DISPLAY OF IRIS GERMANICA BY THE WATERSIDE IN MR. BOWLES' GARDEN AT MYDDELTON HOUSE, WALTHAM CROSS.

afford a check to the action of the roots; it may also so batter down the mulching material as to render it impenetrable by water and air, and the health of the plants must inevitably suffer. It is therefore apparent that intelligence will have to be exercised in the matter if handsome benefits are to accrue. Wisely-applied water is good; if unwisely applied it is the reverse.

Green Fly.—As far as insect enemies are concerned, this is indisputably the worst with which the Sweet Pea lover has to contend; and it is quite enough to satisfy the majority in its particular direction. It is a visitor that wastes no time in making itself perfectly at home and multiplying at a rate that is enormous, and the man who would always keep the upper hand must strike early and strike hard, repeating his attacks as necessity demands. Hosing and syringing are excellent.

HORACE J. WRIGHT.

GARDENS OF TO-DAY.

MR. E. A. BOWLES' AT WALTHAM CROSS.

MR. E. A. BOWLES of Myddelton House, Waltham Cross, is so well known among horticulturists that no apology is needed for bringing his charming old-world garden before the notice of our readers. It was on a sunny day in early May that we responded to Mr. Bowles' invitation to spend the day with him, a day when the sun was gleaming hot and the Tulips and Magnolias were scattering their petals over the garden with a lavish haste, as though racing to keep pace with an exceptionally early summer.

We have, long ago, learned that a garden is a reliable index to the tastes and dispositions of its owner; hence, just as Mr. Bowles is a man of

many parts, so is his garden made up of many sections. For you must know that the owner of this garden is a keen entomologist, an ardent traveller and plant-collector, an artist of no mean order, a scientist, an expert on rock plants, a keen Daffodil enthusiast, an authority on the Crocus ("The Crocus King" the late Mr. Gumbleton used to call him), a Master of Arts, a strenuous worker in the cause of horticulture, and, above all, a good amateur gardener in the truest sense of the word. Thus in his garden a raven keeps company with tame gulls, moorhens with ancient carp, entomological curiosities with the choicest plants; yet all seem to form one harmonious whole, just as the many outlets for his energy and skill combine to make a genial and greatly-esteemed man of its owner.

To deal with all that we saw of interest in the way of plants in this garden would occupy the whole

of this issue; but there were a few outstanding features that appealed strongly to us. Thus in one portion, with a flagstone pathway beneath a pergola designed for the purpose of showing plants to the best advantage, we found a number of plants of considerable rarity. There, for instance, were three of the Citrange, a cross between *Ægle sepiaria* and an edible Orange. Bearing unmistakable evidence of the first-named parent, it is hoped that these will prove as hardy as it and possess the beauty of the Orange.

Here, too, was *Feijoa sellowiana*, in the open, a sturdy plant that was quite at home. How the late Mr. Gumbleton used to rave over this shrub, which he grew so well in his Irish garden! Hard by, and overhanging a garden seat, was a splendid bush, some twelve feet high, of *Solanum crispum* Glasnevin variety, its bounteous display of lilac blue flowers being exceptionally pretty on this May day.

Seedling *Eucalypti* in multitudes, *Clematis montana* lilacina scrambling over the summer-house, with its pretty pale lilac flowers, with

company with the Yews referred to by the water-side is a fine example of the Judas Tree (*Cercis Siliquastrum*), which has deeper-coloured, rosy red flowers than we ever remember seeing before. Apparently it is a variable species under different conditions.

Not far away from the water-side we come upon yet another section of the garden, and a most interesting one to boot. This is devoted to plant curios of all kinds, and the owner has certainly gathered together a wonderful array. Not only are they curious, but to the scientific mind many are of considerable interest. Here, for instance, is a "Witches' Broom" that was taken some years ago from an old Elder and started in life as a separate plant. It still retains the dwarf, herbaceous character that it possessed when attached to its parent, thus proving that the disruption of the plant-cells that took place at the outset was permanent. An Oak-leaved Laburnum and one with crinkled flowers, curious Daisies and Plantains, an Elm with twisted stem and foliage, as well as



ANEMONE SYLVESTRIS GRANDIFLORA GROWING AMONG ROCKS IN THE GARDENS AT MYDDELTON HOUSE.

golden-leaved Balm, and a gorgeous, golden-leaved Bramble that originated, we believe, in Canon Ellacombe's garden, were all to be found in this one little section of the gardens at Waltham Cross. Near by, and standing beside an old-world pond, was a fine specimen of the new *Viburnum rhytidophyllum*, with its long, leathery leaves and huge corymbs of creamy white flowers.

Flowing through the estate at Myddelton House and right through the gardens is the artificial river of the New River Company, and a portion of this, bordered with white and other German Irises, is seen in one of the accompanying illustrations. It is an effective grouping of these plants, which have been in this situation for a number of years. Flanking the river are some fine old Yew trees which must be many hundreds of years old, and on the lawn is a magnificent specimen of *Cedrus atlantica* that was planted by Mr. Bowles' great-grandfather just one hundred years ago. Keeping

hosts of other interesting plants, find a home here. Near by, on one side of a lawn, is a fine standard plant of *Wistaria multijuga*, with pendulous racemes 3 feet long of pale lilac flowers; an ideal way to grow this charming native of Japan.

Yet another section of the gardens Mr. Bowles has devoted to experiments with grey-foliaged plants and purple flowers, and the latter, at the time of our visit, were most interesting on account of the beautiful Darwin Tulips that were blooming. These, Mr. Bowles informed us, were selected for the purpose by our esteemed contributor, the Rev. J. Jacob. After much earnest meditation on the part of that gentleman, he advised, first of all, one named The Bishop, just as a dutiful parson should do, and in this case The Bishop has certainly justified its recommendation. It is the most lovely purple Tulip we have ever seen, and if money will buy them, some bulbs will find a home in our garden this autumn. It is of pale purple shade, tall

and sturdy. Faust is deep black purple; Duke of Westminster, very large, deep purple with white eye; Grand Monarque, very good deep purple; and Gruze is a magnificent Tulip of glowing hue, a little deeper shade than The Bishop. Those who want to plant purple Tulips this autumn may rely on all of these. We must ask Mr. Jacob to write some articles at planting-time, giving some good selections of Tulips according to their colours. Near by we noticed groups of a little Viola that seems to crop up everywhere in the gardens, and which we find is named, among those who know it, Bowles' Black. It is a really charming little Pansy, almost black in colour, with small yellow eye, and a very pert pose indeed. Eremuri are great favourites with Mr. Bowles, but this year the frosts and drought of late spring created havoc among them, so that they were not up to their usual standard.

The rock garden, which is reached by the foot-bridge shown in one of the illustrations, is one of Mr. Bowles' pet hobbies, and is of very great interest indeed. He has filled it with all the choicest plants obtainable; but, unfortunately, lack of space will not allow us to enter into details of these. We must, however, mention the beautiful cluster of *Anemone sylvestris grandiflora*, shown in the illustration on this page; *Berberis Fremontia*, with its blue foliage and crimson young shoots; as well as a number of beautiful blue seedlings of *Camassia Leichtlinii*. Indeed, one of the greatest charms of the whole of these gardens to us, and also to the owner and his numerous gardening friends, are the many kinds of seedlings of all genera that are constantly cropping up. The variations that Mr. Bowles finds among these are alone well worth allowing the self-sown seedlings to grow, although it is scarcely necessary to add that they need thinning with a ruthless hand when their merits or otherwise are determined. Such, then, is this garden of many parts; an old-world garden so near to and yet so far from London, where Mr. Bowles' Huguenot ancestors centuries ago settled and founded their home.

THE FRUIT GARDEN.

FRUIT TREES AND RED SPIDER.

THE branches of fruit trees trained on walls, either nailed or fastened to wires, are warmer and drier than those growing in the open border, throughout the summer months. The leaves on the wall trees very rarely get soaked and well washed with the rains like those in the open quarters, so that the general conditions are highly favourable to the spread of red spider. Of course, it is advisable to syringe the foliage of wall trees frequently and so cleanse them; but it is a very difficult matter to keep down red spider in dry, hot spells of weather by this alone. Soot, judiciously used, is a good preventive; a small quantity in a fresh state should be scattered on the soil at the foot of the wall. When moistened, the ammonia arising from it renders it very distasteful to red spider, which cannot thrive on the leaves immediately above it. Gently water the soot with a fine-rosed watering-can every two days or so in the absence of rain, and renew the soot every ten days. I have used it under Peach, Nectarine, Apricot and Pear trees with great success, the leaves of the trees being much larger and of a deeper colour than those on trees not so treated.

SHAMROCK.

TREES AND SHRUBS.

RHODODENDRON KEWENSE.

THE accompanying illustration directs attention to a large-growing, showy Rhododendron which originated at Kew thirty years or more ago. Growing to a height of 10 feet or 12 feet, it is of vigorous habit and bears large oblong leaves after the manner of *R. griffithianum*. The flowers are borne in May, several appearing together in loose clusters about the time that the young growths appear. They are large, very fragrant, and white suffused with rose in colour, one variety having rose-coloured blooms. The young shoots are protected with good-sized rose-coloured bracts, which add to the effect of the plant at flowering-time. Unfortunately, no record was kept of the species used at the time the cross was made, and although the parentage has since been suggested to be *R. griffithianum* (*R. Aucklandii*) \times *R. Hookeri*, there would appear to be some doubt about the matter, for both of those species have scentless or almost scentless flowers, whereas the fragrant blossoms of *R. kewense* are one of its chief attractions. It would appear that the fragrant *R. Fortunei* might more readily be one of the parents, for it is hardier than either *griffithianum* or *Hookeri*, and stands well out of doors in the neighbourhood of London, *kewense* doing the same, whereas *griffithianum* cannot be depended on, and it is doubtful whether *Hookeri* would stand, could it be obtained to make the trial. As *R. kewense* blooms and begins to grow rather early, it is advisable to give it a position sheltered from the early morning sun, so that in the event of a frost occurring in May its harmful effects may be minimised. By the introduction of a series of first hybrids, such as *kewense*, *Luscombei*, *Manglesii*, &c., among the better-known garden varieties, the Rhododendron garden may be made of more general interest, while no more trouble will be added to cultivation and upkeep. Although *R. kewense* was raised over a quarter of a century ago, it still remains one of the most beautiful Rhododendrons in cultivation.

D.

THE VIRGINIAN SNOW-FLOWER.

(*CHIONANTHUS VIRGINICA*.)

THIS is an interesting subject now flowering with wonderful freedom. The Virginian Snow-flower, or Fringe Tree as it is commonly called, is by no means a new addition to gardens, though it is not commonly met with; it was introduced at the latter end of the eighteenth century. It does well as a bush against a low wall, also as a small tree in the open shrubberies, and appears hardy enough

in both positions. It belongs to the deciduous section of our flowering shrubs, the leaves being lanceolate, glabrous and opposite, the petioles being much darker in colour than the leaves or other part of the stem. The flowers are produced in racemes fully 6 inches long, and cannot fail to be recognised.

Each flower has four strap-shaped petals fully an inch long and exceptionally narrow, purest white in colour when fully open, each blossom being borne on a fine stalk. This shrub, a native of North America, must not be confused

condition for a considerable length of time on the plant. The growths are long, drooping in habit, and deciduous. The leaves are small, and the reverse is covered with a pale tomentum. Generally, these are produced in whorls of three on very short petioles, but occasionally one finds a branch with four at each interval.

A HANDSOME CLIMBER.

(*LONICERA CILIOSA*.)

THIS is one of the most handsome plants we have just at present, occupying a pole in the shrubberies, which it clothes perfectly with its twining growths, and is now covered with its trusses of deep orange yellow tubular flowers, which remain in a fresh condition for quite a long time. The plant, I suppose, derives its name from the leaves being ciliate, *i.e.*, the margin surrounded with fine hairs.

Elstree.

E. BECKETT.

A LITTLE-KNOWN DAISY BUSH.

(*OLEARIA MYRSINOIDES*.)

THE genus *Olearia* comprises a large number of handsome ever-green shrubs, all of which inhabit Australia and New Zealand, where they are commonly known as Daisy Bushes. While the majority of the species thrive and flower freely in the open air in the warmer parts of the British Isles, there are not more than three which can justly be classed as hardy in the London district. Of these the well-known *O. Haastii* is frequently met with in gardens, and is, perhaps, the most valuable of all as a town shrub. *O. macrodonta* is also a very attractive species; but while plants will come through an ordinary winter unharmed, it is liable to injury during very severe weather; therefore it is best treated as a wall shrub. Another valuable species is *O. myrsinoides*, and is undoubtedly the hardiest of the genus. Introduced from Australia over seventy years ago, it is surprising that it is not more generally cultivated. The plant forms a low-spreading shrub from 2 feet to 3 feet high, with small Holly-like leaves, being deep green

and glabrous above, while the under surface is densely clothed with a silvery tomentum. During May and June the flowers are freely borne in clusters along the slender growths, often forming a spray 2 feet or more in length. Individually, the flower-heads are about an inch in diameter, pure white, with a yellowish disc. *Olearias* are among the easiest of shrubs to manage, and while they will grow in almost any soil, they thrive best in a fairly light, well-drained compost. Most of the species may be readily increased by cuttings of the half-ripened wood inserted in pots of sandy soil during the autumn months. Considering the ease with which these beautiful shrubs are grown, it is surprising they are not more often seen. One of the most interesting groups at the Royal International Exhibition was a collection consisting of thirty-three distinct



RHODODENDRON KEWENSE, ONE OF THE MOST BEAUTIFUL HYBRIDS YET RAISED.

with *Chimonanthus*, so nearly spelt alike, but, of course, totally distinct.

A NEW HONEYSUCKLE.

(*LONICERA THIBETICA*.)

THIS shrubby Honeysuckle was introduced, among others, by Mr. E. H. Wilson, and has this spring flowered with us for the first time. Apparently an excellent doer and perfectly hardy, it has developed into quite a large bush with long pendulous growths. The flowers, which are produced on the young growths, are of a pleasing lilac shade of colour and deliciously fragrant, mostly produced in pairs on a short, thick footstalk, but occasionally with a much smaller and later flower closely set between them. The flowers are about half an inch in diameter, quite tubular, and remain in good

species of *Olearia*; these were exhibited by Captain Dorrien-Smith, for which he was awarded a gold medal. W. T.

THE DAFFODIL SEASON OF 1912.

(Continued from page 311.)

Are There Two Yellow Stripes?—I have had numerous letters telling of leaves marked with yellow stripe, or with something near akin to it, and some say that by spraying with appropriate liquids they have got the evil under, suggesting as a corollary that the cause is a fungus. If there are two yellow stripes, both have been very much in evidence during the past season.

Mr. W. F. M. Copeland writes:

"I cannot make out about the disease at all. If it is not a fungus, why does it spread as I have seen it do? If it is weakness, why does it show it if the bulbs are replanted in different soil and in good soil well limed?"

If I understood Mr. Engleheart aright in a remark he made at the Birmingham post-dinner note-comparing, he thinks there is only one yellow stripe, and it is caused by the plant having to live in some unsuitable environment of soil or climate. This, at any rate, is my view, and I am now going to explain the above experiences according to my theory.

First, the natural growth of the plant may easily be mistaken for the beneficial effect of a fungicide. I have repeatedly noticed that in a full-grown leaf the bottom part is not nearly so much affected as the upper half. This year, for example, one of my King Alfred patches was simply awful when it was 3 inches or 4 inches high. Later on it was nothing like so bad; in fact, the parts of the leaves that Nature had allowed to remain underground until a more genial time prevailed have very little of it. Now, suppose I had sprayed when my leaves were 3 inches or 4 inches high, I might readily have ascribed the after-improvement to that, whereas it was only the natural order of things. Secondly, I do not expect "different soil" or "good soil well limed" to work a miracle. And this it would be doing, in my opinion, if the change was "yearaneous," let alone "instantaneous." I am thankful to say I have never had blood-poisoning myself, but those who have had it have told me that their medical advisers have invariably told them to be extremely careful for three or four years. There seems to be something of the original trouble left in the system for that length of time. Just so with "yellow stripe." A plant must be given time to get out of it. Some are able to throw it off quicker than others, but I never expect the change to take place *instantly*. Give it time, even when the plant has been transferred to pastures new.

Sickle-shaped Leaf.—All Daffodil-growers know this appearance. There is often a sickly yellow

look about the leaf as well. In the earlier part of the forcing season it is not infrequent in pot-grown material. I have heard of a good deal of it this last season, both under glass and in the open. In my opinion it is largely due to a mechanical injury resulting from the sheath not working as it should do, although I do not altogether quite see why this should induce the sickly look I have referred to above. In pots it (the yellow look) seems to have some connection with the ripening of the bulb in the previous year. Late-ripened bulbs, if they are forced before their time, are very subject to it. In this connection, by the way, may I say that I notice in Messrs. E. H. Wheadon and Sons' (of Guernsey) list for 1912 that attention is drawn to the virtue of early ripening for early



A HARDY JUNE-FLOWERING DAISY BUSH, *OLEARIA MYRSINOIDES*.

pot culture. I never remember actually seeing it in print in a bulb catalogue before, but it is an important point, one well worth a little consideration.

Topsy-turvy in 1912.—I have had surprising results. Many varieties have turned a somersault in their behaviour. The bad have been good and the good bad. For example, Seagull was poor and small, Lucifer shy, Torch about half its usual size, Evangeline poor, Apricot miserable, Weardale Perfection full of stripe, Baroness Heath rotten; while, *vice versa*, Diana was never half so good, and the ancient but most attractive and distinct variety Sir William Harcourt very vigorous and free from its usual streak. Both Eyebright and Gloria Mundi were much above their usual form. In certain gardens the usual sequence of flowering

was altered. A clergyman in Ireland writes that he had Grandee in bloom before either Lord Roberts or Weardale Perfection. Reference to colour will come under this head. In most districts it was decidedly above the average, but this was not the case with 'me. I never saw Albatross so pale, while precisely similar bulbs grown under glass had brilliant red edges to their cups. Bernardino is usually much deeper and Blackwell ditto, than they were this last spring.

Seed-bearing in 1912.—I am told that all except trumpets have given but little seed. Luckily for me, we settled last autumn to devote this season specially to them, and nearly all my seed-bearers are either trumpets or their next-door neighbours, giant Leedsis.

My seed crop promises to be good, but bearing out what I am told, a fair-sized block of Princess Mary will hardly give me half-a-dozen pods. The few Poets, too, that have been hybridised have been most disappointing.

More Personal Matters.—When writing my little book on "Daffodils" this time two years ago, I devoted the last paragraph to white triandrus hybrids, and advised everyone to try to either acquire or raise some for themselves. Ever since my liking for these lovely refined pure white marble-like flowers has increased, and this last spring has still further intensified their cold beauty in my eyes. I am glad to say that they have now made their *début* in trade lists, and that many can be had for quite small sums. The very best are still dear, but as they are easy to raise from seed, I anticipate a rapid increase in their numbers and a corresponding lowering of prices. I am told that the pollen of calathinus gives much more satisfactory results, both in size and constitution, than the ordinary triandrus albus. Recipe for obtaining the same: Procure some good Leedsis or similar varieties, such as Albatross, and also some triandrus calathinus. Transfer pollen of the latter at the proper time to the stigmatic surface of the former. Collect the seed when ripe and sow in the July following. The lovely Alabaster, May Hanson and Maid Monica came from Minnie

Hume x t. calathinus. Another item which may be a useful hint for some is the great success of the "Buco" Hand Cultivator. I find for my purpose of loosening the soil between the rows of Daffodils that the small, short-handled size is the most useful. I take the short one out and put in its place an ordinary long one. The larger five-pronged implement is also used when the rows are not very close together. I first saw these at Colonel Cotton's bulb farm at Llanfair, Anglesey, twelve months ago, and they more than confirm all the flattering things he said about their working. A last word must be one about the lasting power of Pearson's Alert. It opened here this year on March 6, and it was still a flower in the distance on April 10. Can anyone go one better with a true tale of lasting?

JOSEPH JACOB,

GARDENING FOR BEGINNERS.

THE ART OF BUDDING ROSES.

BUDS are formed in the axils of leaves, in the angle between the leaf and the shoot or branch. Buds contain, in embryo, either flowers or shoots, sometimes both. The round-shaped buds generally contain flowers, and the conical-shaped or very pointed buds mostly contain a shoot only. A bud is only a tiny object, yet it will grow and form a large branch, or even a whole tree. When taken from one Rose tree and budded on another, or on the common hedge Briar or any suitable stock, it still retains its distinctness as regards variety. Budding may be done in July, also in August, (but this year Roses are at least a fortnight in advance of normal seasons, and in consequence the work may be carried out within the next week or so.) The proper time is when the bark separates freely from the hard wood. Never make use of a poor stock which is not growing freely, whether it be a standard, half-standard or dwarf stock. The latter must be strong, as it has such a great influence on the growing bud. If possible, select a dull day for the work of budding, and if fine rain falls so much the better. A Rose bud is a frail thing in itself; it is, after being severed from the parent bush, dependent upon the sap in the tiny portion of bark for nourishment, at least to a great extent.

Selecting the Buds.—The best are those buds growing near the middle part of a branch. If branches are cut off, they should be at once placed in a vessel of water, and the amateur will act wisely if he retains them in water and uses the buds direct from them as the latter are inserted. A shows the buds in the axils of the leaves, and the curved line denotes the way in which the buds are to be severed from the branch. It is very important that the cut be made well under the base of the bud, as shown at B, and not too close to it, as shown at C. There will be a small portion of hard wood attached to the shield or bark containing the bud, and this hard wood, D, must be carefully



SHOWING HOW BUDS ARE TAKEN OFF AND PREPARED BEFORE INSERTION.

removed, as shown at E, leaving the base of the bud, F, quite exposed but not bruised. Directly the hard wood is taken out, the bark will curve a little, as shown in the illustration at F, and it must be moistened with water immediately. G shows where the buds are to be inserted in the branches of a Briar to form a standard or half-standard Rose tree. The slits must be bark deep only, and made quite low down, as near as possible to the main stem of the Briar.

How to Insert the Bud.—H shows the T-shaped cut made in the bark; I shows the bark raised from the hard wood, and this must be done with the aid of an ivory-handled budding-knife or a smooth wedge-shaped piece of Oak. At J the bud is shown inserted. When actually putting in the

bud, cut off the top portion of bark square across so that it will fit in quite firmly. Comparatively short incisions and short buds should be the rule, as small wounds heal more quickly than large ones, and if the bark is moist when inserted it will adhere to the new branch very closely and so exclude air. Retain the leaf, or a portion of it, as it will sustain the bud for a time. New bast matting should be tied round the newly-inserted bud, as shown at K. A piece a quarter of an inch wide and 12 inches long will be sufficient for each bud. Moisten the buds night and morning with a fine spray. G. G.

PLANTING GREENS IN CLAYEY SOILS.

A HEAVY, clayey loam, when well worked and prepared, is a fine rooting medium for Greens used both for the autumn and the winter supplies I would, however, give a word of warning to those inexperienced in the growing of crops in such soils. Greens planted in unmanured, badly-worked, clayey soils rarely prove satisfactory in rather dry summers. The plants recover somewhat when the autumn rains come, but in the meantime the leaves turn very blue and become hard, and then the hearts do not grow as large nor as tender as they should. Thoroughly break up the sub-soil and mix some rotted manure with that portion lying about four inches below the surface. The top soil then remains more open and is warmer. A clayey soil is not at all difficult to work after a heavy shower of rain has fallen on it when it has been for a short time lying dry and hard. When the plants are put in, however, the ground must be rather dry; then, if they are watered immediately, they will grow very freely. Use the hoe often between the rows of plants, and so keep the surface open, prevent cracking, and kill weeds while in a small state. So treated, the crops will be heavy. B.



BRIAR STOCKS BEFORE AND AFTER BUDDING HAS TAKEN PLACE.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

The Kitchen Garden.

Winter Greens.—Continue to plant these in variety for producing a plentiful supply during the winter months. Where space does not permit of a piece of ground being set apart purposely for them, they may be planted between other crops that will not occupy the ground too long, such as winter Onions and Runner Beans. Select showery weather for planting, even though the ground is firm, this will be found to be so much the better, and the plants will make sturdier growth and be better able to stand the cold. When the first crop is cleared, just fork over the ground between the rows of winter greens.

Peas.—It is not generally advisable to sow after this date, though in a congenial season a small sowing of a suitable variety will provide some good dishes. Essex Wonder is a good variety and prolific cropper. Continue to stake earlier sowings as they require attention. Stake firmly and neatly, and clip off the tops to the desired height according to the variety.

Turnips.—Make another sowing or two, according to the requirements, in drills 1 foot apart, and if the weather is dry cover with short lawn mowings, as I think I have previously advised. These are an excellent preventive against the Turnip flea. Keep the surface soil well hoed between growing crops, and dust with soot in showery weather.

Globe Artichokes.—These will benefit, if the weather is hot and dry, by a good soaking of water and the addition of liquid manure-water.

Plants Under Glass.

Panicum variegatum.—A fresh batch may soon be obtained by inserting cuttings, say, five or six, round the edge of a 3-inch pot and well watering in. For a week or two these may be stood in the shade in a warm house. The same applies to Tradescantias, Fittonias, Pileas, Selaginellas and other like subjects.

Cyclamen.—The young plants will by now be ready for their final shift into the pots in which they are to flower, and 5-inch pots will be large enough to produce good plants. A compost of good fibrous loam, with a fair proportion of flaky leaf-mould, a little sharp road grit and bone meal, will answer well. Pot fairly firm; leave the corm showing well above the level of the soil when finished. Water well after potting, but avoid over-watering afterwards until roots are active. Stand the plants on a good, firm ash bottom well sprinkled with soot. Keep the surroundings moist, give plenty of air, and shade from bright sunshine, but not too heavily.

Herbaceous Calceolarias.—For greenhouse and conservatory decoration these are beautiful subjects in the spring and early summer months, and when a good strain is selected, the colouring of the flowers is most varied and beautifully marked. Sow the seed thinly as level as possible, on the surface of a pan filled with a fine compost, and just cover with some sandy soil. Well moisten, as previously recommended, by immersing nearly to the rim in water. Stand in a shady place, cover with a sheet of glass, and further shade when sunny with paper. The seedlings when large enough will need carefully pricking off, and must be placed where they will be free from attacks of slugs. Keep the surroundings throughout their season of growth moist and cool.

Streptocarpus.—The seedlings that were sown early in the year and pricked off into boxes will now be large enough for potting singly into 3-inch pots, and possibly a few of the more vigorous into a size larger. The plants will then soon commence to flower, but, unless particularly wanted for decorative purposes, they will make better growth if the flower-spikes are removed.

Fruits Under Glass.

Strawberries for forcing next season for the earliest batches need to be thoroughly matured early, so that when enough runners are to be obtained sufficiently large, layering may be proceeded with. Three-inch pots are best for the purpose, though some growers favour layering direct into the fruiting pots. When the former method is adopted, use clean pots, so that they

knock out readily. One crock is sufficient, and a compost chiefly of loam will answer well. Stand the pots, as many as needed, round the parent plant, then slightly bury the runners and peg down. Various methods are adopted, including wire pins, some growers fastening with a stone; but one of the best I know, where a quantity has to be done, is to take a bunch of thin Willow or Spiraea sticks cut last winter and put them in a tank of water for twenty-four hours; cut up into lengths of about three inches and bend double as wanted. Avoid over-watering, but damp over twice daily when the weather is warm and dry.

Melons.—When the earliest fruits have been cut, and it is the intention to plant the house again, have the whole of the contents removed and give the walls a thorough whitewashing, well cleansing the glass and woodwork before building up another bed.

The Hardy Fruit Garden.

The Rain.—Since writing the last calendar we have had some welcome showers, which have had a good effect on all hardy fruits, both in cleansing the growths and supplying water at the roots. At intervals the application of a quick-acting artificial fertiliser on swelling crops will be advantageous.

Figs.—Look over the trees and remove weakly shoots where the growth is crowded, and secure the newly-made shoots either by nailing or tying with broad strands of raffia. Avoid having these tied too tightly.

The Flower Garden.

Verbenas.—As the growths lengthen, peg them down, and remove the flower-buds for a time to encourage growth. Keep the surface soil stirred between the plants.

Michaelmas Daisies.—These are now growing apace, and the growths will need securing to the stakes with raffia. The longest of the growths that are running away may be stopped, but otherwise these will be better for not doing so, as the plants will be fully branched at flowering-time where five or six growths are allowed to remain. Keep the Dutch hoe moving frequently between them to encourage growth and eradicate weeds, and during showery weather a dusting of soot or fertiliser will be beneficial. If any signs of mildew appear, syringe the plants with an insecticide, such as Quassia or some other specific. The Amellus section, though dwarf, are better for having the main growths loosely supported to a single stake.

Mignonette.—Thin as becomes necessary and make another sowing. Among the Roses this is generally much appreciated.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Shrubs.

Rhododendrons.—It is usual to relieve the finer varieties of plants of seed-vessels, which is undoubtedly a great help towards enabling them to produce and mature shoots to flower another year. Attention should at the same time be given to the stems, lest suckers from the stocks should be draining the plants of their sustenance. Some prune at this time, but pruning must be done with much judgment and only on healthy, vigorous plants.

Dead Wood.—I never remember so many branches, and in the case of Hollies so many plants, to have died since spring, which may be only the effect of last year's drought, but probably also of the very hard frost in January. Besides being unsightly, dead wood is very harmful to the living shrub, and it is therefore very important that an effort should be made to remove it at the earliest moment.

Flowering Shrubs.—Seldom, if ever, have these been more floriferous than this year, and some that have failed to flower hitherto have this year done so. Of such may be mentioned Xanthoceras sorbifolia. Pyrus Maulei, if at all crowded with shoots, should be relieved of a portion. Choisya ternata also may be lightly thinned and pruned into shape, should the bushes be growing one-sided, which they have a tendency to do. Overgrown Scotch Roses may now be cut to the ground, consequent on which they will, like Willows, make

long shoots for next year's flowering. Hedges of Sweet Briar grow very rapidly at this time, and must not be allowed to go untrimmed.

The Hardy Fruit Garden.

Breast-Wood.—Continue to relieve all kinds of trees of superfluous growths. Red Currants may have their shoots shortened, and should aphid attack Gooseberries, the parts affected may be cut off and burned at once.

Figs.—These will now need attention, and new growths should be selected to lay in for cropping another year. The shoots must not be permitted to extend outwards, but laid in close to the wall in order to obtain all the heat possible.

Grafts.—The ties on these should be removed, and if it is considered necessary, others substituted for them, so that the bark may not be cut. The number of shoots, where too many have pushed, must also be reduced to a proper number. This will give those left all the sustenance available and make them much stronger in consequence.

Apples.—About this time American blight shows itself, and means must be taken, if not to exterminate it, at least to keep it under. Syringing very forcibly with hot water, or that strengthened by soft soap and petroleum or a little salt, is a simple but fairly efficient disinfectant for summer use. Irish Peach, which sets in clusters, may now be thinned somewhat freely if large fruit is expected or desired.

The Vegetable Garden.

Cauliflowers.—Seeds of a second-early variety sown now will provide nice medium-sized heads for using in late autumn.

Large Onions.—Repeated surface-dressings of stimulating manures are almost essential to the production of these. A fortnight may be allowed to intervene between them. A rather deep surface-hoeing subsequent to application is of great benefit. Winter Onions should be harvested as soon as ready.

Brussels Sprouts.—The earliest and largest of these should have a bank of soil applied to each side of the drill. The drills being 3 feet wide, a spade, should the ground be hard, is the best implement for the operation. This, moreover, loosens the soil to a far greater extent than is possible with an ordinary draw-hoe. Usually stimulating manures are hurtful to this crop, that is, if small, hard sprouts are the objective of the cultivator.

The Flower Garden.

Violas.—Particularly on light soils these have a tendency to go to seed, and then to become quickly "seedy." The cure for this is to pick off all the flowers and seed-vessels, following which the unopened buds will make the beds as gay as ever in a few days and the plants be enabled to retain their freshness.

Seed-Sowing.—It is the usual practice to sow Hollyhocks about this time, in order to secure strong flowering plants for another year. There is still time to sow Humea elegans, also Celsia coromandelina, C. pontica, Delphiniums and many more hardy plants.

Dahlias.—To have these, especially plants from old roots, dwarf, keep pegging down the shoots, at the same time cutting away weakly parts. The earlier plants will be now well forward to bloom. Those from cuttings, as a rule, are best staked, and these will now need attention at very short intervals. See that the thickening stems are not being cut by the ligatures made earlier in the season.

The Plant-Houses.

Seed-Sowing.—Canterbury Bells and Campanula pyramidalis intended to be flowered in pots next summer should be sown without further delay. A few potfuls of Mignonette may also be sown for autumn. These are best grown on single stems and several in a pot, using a very open, rich soil. It is always advantageous to cover the surface with some material that at once darkens the seeds and keeps the soil from drying.

Climbers.—There will be much labour in tying climbers and arranging the shoots so that they do not encroach on each other, a condition that is not only bad for the plants, but renders the keeping of them clean very difficult, insects invariably being attracted thereto. The strong young growths of Lapagerias sometimes are eaten by slugs, an occasional dusting with soot being effective in keeping these off.

R. P. BROTHERSTON,
Tynningham, Prestonkirk, N.B.

THE NARCISSUS FLY.

DURING the last few years the two-winged fly, called by scientists *Merodon equestris* (the latter name having nothing in common with horses), appears to be increasing in numbers in this country. It is called the Narcissus fly, but lately has been attacking other than Narcissi, and I myself know that it has attacked *Scilla* bulbs. It has already caused much damage by destroying bulbs of Narcissi, and latterly *Liliums*, and my idea now is that it may attack other members of this family.

The life of this insect is as follows: During the end of May and June, according to season and climatic conditions, this two-winged fly is on the wing, and may be seen in bright sunshine basking on the leaves of Narcissi and other plants. The female lays the eggs between the leaves at the surface of the ground, and the young grub, which is almost identical in appearance to the house-fly or blow-fly maggot (to which it is closely related) travels down and burrows its way into the bulb, where it is feeding during the time the Narcissus is forming its bulb growth for the season. It remains in the bulb in the hollow which it has eaten out, and during early spring it transforms into a chrysalis or puparium. The puparium is usually the colour of the soil, and is shaped almost like a horse-bean, but with grooves and ridges on the incurved side, leaving the Narcissus bulb (which it has usually killed) and hatching out at the end of May and early June. The fly belongs to the diptera or two-winged flies, to which, as I have said, the house-fly and bluebottle, or blow-fly, belong.

This is a well-known insect on the Continent, and may be as well known here if precautions are not taken to keep it in check. In size it is about half an inch long, with very large eyes and very strong legs, and may be easily distinguished from the bee by having only two wings, which are folded along the body, hiding it, and by its not having longish black antennæ or horns, which all bees have. The large eyes are black, separated with a short, stiff line of dark gold hairs; the wings are transparent and attached to the large body; the abdomen is densely covered with short, stiff hairs, dark gold, and the insect looks, at the first glance, like one of the small black and tawny bees, but may at one glance be distinguished from them by its having only very short and hardly noticeable antennæ or feelers. The antennæ are the most easily noticeable difference, but it has also only two wings, while bees have four. It sings with rather a high note when disturbed.

J. HENRY WATSON.

THE EDITOR'S TABLE.

Pæonies from Langport.—The arrival of a box of handsome Pæonies sent by Messrs. Kelway and Son of Langport serves to remind us of the usefulness of these hardy flowers at this season. Pæonies are foremost among plants for the flower garden. No herbaceous border is complete without them, and they are equally at home by the side of grass walks or in a woodland garden. Moreover, Pæonies lend themselves in a most pleasing way for distant effects, while as cut flowers they are extremely useful for house decoration. The hardiness of the Pæony is proverbial. Indeed, it is claimed to be as hardy as the Dock by the wayside, thriving in any soil without need of protection in the severest weather. Among the

flowers sent we were particularly impressed with those of the new section known as the Imperial. These flowers are noteworthy for their delicate tones and beautiful art shades. Unlike both single and double varieties, those of the Imperial section have outer shell-like guard petals surrounding a rosette of petaloids and golden filaments. The variety A. M. Kelway of this section is most charming, and the same may be said of Queen Alexandra, a lovely flower of absolute purity of colouring, resembling an open Water Lily, with outer petals spotless white, and golden clusters of anthers within. The truly double flowers are as popular as ever, and the variety Emperor of Russia, a magnificent deep purple-crimson, should find a place in every garden where these flowers are prized. Exquisite, another double variety with handsome pink flowers, and Mr. Manning, a very deep crimson, are among the best of the doubles now before us. The single varieties are always welcome, and Purple Emperor, a deep rosy purple of wonderful size, is one of the most beautiful we have ever seen. We remind our readers that now is the time to make a selection and plan their borders for autumn planting.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—*The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR OF THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plans for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.*

FLOWER GARDEN.

SWEET PEAS NOT DOING WELL (E. T.).—You should immediately pull out and burn the unsatisfactory plants. We have no sympathy whatever with the preparation of the soil in trench form, and should be inclined to think the roots have reached rank manure. If the soot used was new, it would cause the trouble. We cannot conceive that the soil is sour in such a season unless it was excessively manured and imperfectly cultivated. Lime will be advantageous as far as the soil is concerned, and it will not injure the plants.

DIVIDING IRISES (A. G.).—Irises should be divided and replanted in spring, preferably March or early April. Avoid planting them in big clumps, since better results follow upon free division and replanting in well-prepared soil. *Iris stylosa* prefers a hot, sunny position at the foot of a warm wall, and much old mortar or lime rubble mixed with the soil. *Iris sibirica* is a moisture-loving species, and should be catered for accordingly. Herbaceous Pæonies should be divided and replanted in August or September. The subjects should never be transplanted in big clumps intact. The Tree Pæonies should be planted during September or October, preferably while the soil is warm.

SWEET PEAS FOR EXHIBITION (Alpha).—Your collection is comprehensive, but several varieties of conspicuous merit are omitted. You do not say how many varieties you desire to give special attention to with a view to exhibition, so thirty are herein specified, which would enable you to exhibit in a class for twenty-four distinct. In your district (Caithness) we should expect the plants to reach their best about the middle of August, but much depends on the weather. The chosen varieties are: John Ingman, Paradise Ivory, Mrs. Henry Bell, Etta Dyke, Elfrida Pearson, Mrs. C. W. Breadmore, Earl Spencer, Mrs. Routzahn, Asta Ohn, Countess Spencer, Mrs. Cuthbertson, Dobbie's Cream, Loyalty, Mrs. Heslington, Nubian, Hercules, Moneymaker, Clara Curtis, Eric Harvey, Mrs. W. J. Unwin, Barbara, Doris Usher, Charles Foster, Edrom

Beauty, Thomas Stevenson, Maud Holmes, Scarlet Emperor, Edna Unwin Improved and Flora Norton Spencer.

JAPANESE IRISES (F. W.).—Prick out the seedlings, by all means, in a richly-prepared bed of soil, selecting a position of some shade and where moisture is assured or readily supplied. The soil these things prefer should be of loam, leaf-mould and manure with a little sand, the whole to be passed through a sieve of half-inch mesh and well mixed. Do not attempt a raised bed; these plants love moisture. If given fair or liberal treatment, the plants should have progressed sufficiently to be given their permanent quarters in April, 1913. Usually three or four years are necessary before the flowering stage is reached, and even then it may not be characteristic or good. How good will depend not a little upon the liberality of their fare, and not a little also upon the strain from which the seedlings have come.

ORIENTAL POPPIES FAILING (N. H.).—It is curious that the plants appeared all right through the winter and have since made but little progress, and we fear there is an influence at work, apart from the fact that your garden is a town one, that we know not of. These plants do much the best in the open border, and, once established, will go on for years without trouble or care. In the young state the growth is meagre, and we are wondering whether as non-flowering plants they have not practically completed their growth for the season. In all the circumstances, we can only advise you, a little later on, to carefully remove the soil about the plants to see if they are alive and well at the root, and, if so, to possess your soul in patience. If you have more than one plant, there would be no great risk in lifting one for examination at any time, and you might let us see it. Without some such evidence we can only speculate as to the cause of failure, and the behaviour of your plants points to something more than the period of shade to which you refer.

PROPAGATING PHLOX SUBULATA AND SUN ROSES (H. P.).—There should be little or no difficulty in propagating these plants if the right material at the proper season is obtained. After flowering is well over, slightly shorten back the growths of the plants with scissors or knife, and give attention to watering, so that a new growth quickly results. In a few weeks' time, when the new shoots are about two inches in length, they may be stripped (not cut) away from the parental stem in such a manner that the "heel," or junction with the stem and cutting, is fully reserved to the latter. In this way, without further ado, the pieces may be inserted in a cold frame in very sandy soil. Cuttings such as these may be inserted from July to September, or even later. Much the same principle should be applied to the other groups named, though these root freely and well when the cuttings are made to a joint in the ordinary way. The thing to aim at is a cutting of youthfulness and vitality, old flowering shoots being usually of but little value. August and September are the best months for the latter group, and cold-frame treatment will be found much the best.

THE GREENHOUSE.

CULTURE OF GERBERA HYBRIDS (Anxious).—As far as we can learn by your letter, there is nothing whatever wrong in the culture of your Gerberas, unless, perhaps, it be the inclusion of burnt refuse in the potting compost. Still, although we have not seen it used for the purpose, we do not consider it would do any harm. You say nothing as to the time when the seed was sown nor the size of the plants. One point to bear in mind with regard to the successful culture of Gerberas is that, although the seed germinates very quickly, the young plants grow slowly afterwards. During their earlier stages the root progress is by no means rapid. The temperature named by you is very suitable for these pretty flowering plants, and if they are given a reasonable amount of water, we think they will soon grow away freely and ultimately flower. They are certainly plants that will take their own time, and they cannot be hurried with additional heat. Should our surmise as to growth soon taking place not be justified by results, we should like to hear further from you, giving us fuller particulars.

FRUIT GARDEN.

PEAR LEAVES ATTACKED (J. C. W.).—The Pear leaves are attacked by the Pear leaf-blisters mite (*Eriophyes pyri*). This mite is probably carried from tree to tree on the feet of insects. Spraying with Oregon wash is probably the best remedy, and it should be applied in winter. Nicotine-spraying might probably with advantage be tried now. If only one tree is affected, and that in a pot, it would probably stop the spread of the plague to destroy that tree. It would be better to use lead arsenate paste instead of Paris green against the caterpillars, as there is less danger of injuring the foliage with that.

STRAWBERRIES NOT FRUITING (J. R.).—From what you state in your letter, there does not appear to have been a single item of culture likely to secure the best results omitted in your case, and therefore it is difficult to suggest what the cause of failure has been. The complaint is general this season of inexplicable failures with Strawberry crops, in pots under glass as well as out of doors. We can only come to the conclusion that the great heat and drought of last year are at the bottom of the trouble. In many parts we know that the growth of the plants was seriously crippled. In fact, on warm, light soil in many parts (where watering could not be resorted to) the plants were killed outright. We all know that, in the absence of a strong and healthy growth of the plant during the previous year (after fruiting), the chances of good crops the following year are greatly lessened,

because it is quite impossible to have a healthy and full development of the flower-buds, or crowns, in the absence of this free and healthy growth the previous summer.

KITCHEN GARDEN.

MILLIPEDES AND ONIONS (G. W.).—The animals sent, attacking the Onions, &c., are millipedes (*Julus complanatus*). Unless the use of the water from the cess-pool has caused the soil to become sour, a condition which can be corrected by the use of lime, we do not think it has had much to do with the millepedes. We should recommend you to try Vaporite or Apterite, or some such soil fumigant, which will probably drive away the pests, and in the autumn give a dressing of lime to the soil.

ABOUT PEAS (Gowland).—The little lumps on the roots of the Peas are not a symptom of disease, but the outward and visible sign of the inward presence of numerous bacteria which take nitrogen from the air and pass it on to the plant so that it may be used by it. They are of great advantage to the plant. The Peas have been killed by the fungus *Thielavia basicola*. The fungus seems to thrive best where the drainage is not thoroughly efficient and where the plants have been exposed to some weakening influence. Thorough drainage, thorough cultivation and a sufficient supply of potash and phosphates are essential to success.

CAULIFLOWERS AND CATERPILLARS (X. Y. Z.).—Yes; the caterpillars found in the Cauliflowers are usually those of the white butterfly. The means of checking them are the capture of the butterfly, destruction of the eggs, which are laid on the under side of the leaves, hand-picking the caterpillars, and spraying with salt water (say, a handful of salt in two gallons of water). Mosquito netting spread over the patch will be of material assistance. The destruction of the chrysalides, which may be found in crevices in walls and against fences in the winter, is an important measure. The growing of Cabbages and Cauliflowers in clean situations, away from fences and hedges, is also important.

PREPARING MANURE FOR MUSHROOM-BED (W. T. H.).—The manure would cool as much in an hour if spread out thinly on the ground as it would in a longer time. Probably your manure is too dry, and does not decay in the process of fermentation as it would do if it contained more moisture. The hot weather at the present time helps to keep the temperature high. In any case, seeing that the manure has been in preparation so long, we would now make it up into a bed. If it is dry, let it be turned over first and slightly moistened with water, and then made into a bed as directed, in the driest and coolest position you have in the garden. Spawn immediately the thermometer drops to 80° Fahr. on the surface of the bed. If you can make a rough framework of stakes over the bed and cover this with any odd mats or other available material, in order to keep it cool and dark, it will help the bed much during the summer, as Mushrooms do not like too much heat at any time.

MISCELLANEOUS.

THE YELLOW-FLOWERED CHERRY (Mrs. A. H.).—October is a good time for planting the yellow-flowered Chinese Cherry (*Prunus serrulata flore luteo pleno*). It may be obtained from Messrs. Veitch, Coombe Wood Nursery, Kingston Hill, Surrey. The specimen sent for examination is *Ceanothus veitchianus*.

RED GROWTHS ON LIME LEAVES (D. M. M.).—The peculiar reddish growths on the Lime leaf are due to the presence of mites, which cause irritation to the plant and induce the formation of galls having the curious "nail-like" appearance and the red coloration which these show. The mite is fairly common; it may be seen, if the gall is cut open and magnified, living among the hairs in the interior of the gall.

VARIOUS QUESTIONS (E. M. S.).—(1) Grow five in a 5-inch pot. If you want the plants to flower early, do not stop them. If you want to make them more bushy and to flower later, stop them, or pinch them back, as you term it. This should be done as soon as the plants restart freely into growth after being potted. (2) Yes; certainly. Now is a good time to apply it. (3) Royal Albert is still one of the best for early forcing. Victoria is still excellent. Daw's Champion is a comparatively new variety, of great excellence in every respect.

BOX OF LARVÆ (N. B.).—The grubs are those of the clay-coloured weevil, which is now turning into the chrysalis state. They are very destructive to the roots of many kinds of garden plants, and extremely difficult to deal with on a large scale. It would be well to try to capture as many of the beetles as possible. They are, as the name suggests, the colour of the soil, and leave the latter during the evening to feed on the leaves of plants, on bark of trees and the young shoots of Raspberries, Vines and so on. They may then be made to fall on a sheet spread beneath the plants they attack, and may so be captured. The same result follows if a light is suddenly thrown upon them. They are about three-eighths of an inch in length, and have very hard skins. Next to hand-picking, the best method of dealing with them while they are in the soil is to inject carbon bisulphide, at the rate of about one ounce to the square yard, into the ground they are haunting. This is a very poisonous and inflammable compound, and must be used with great care. The fumes will spread through the soil and kill all animal-life; but unless the liquid comes into actual contact with the roots of the plant, the plant itself will not be injured in any way. Where the ground can be turned up, the insectivorous birds, such as starlings, robins and so on, will do much to check the pest.

LEGAL POINTS.

Fruit, Birds and Curtilage (F. V. H.).—A correspondent whose fruit is suffering from the depredation of birds asks whether shooting is allowable if they are within the curtilage. The Wild Birds' Protection Acts, 1880 to 1890, prohibit killing between March 1 and August 1 certain scheduled birds, such scheduled birds being chiefly those which are rare and becoming extinct. I do not think he has much to fear from this series of Acts, and I think his question is rather directed to shooting without taking out the ros. gun licence. By 33 and 34 Vict. c. 57, a penalty of £10 is imposed on every person who shall "use or carry a gun elsewhere than in a dwelling-house or the curtilage thereof" without having in force a gun licence. The expression "curtilage" includes the yard, offices, and enclosed garden surrounding the house, but it does not include an orchard separated from the house by an enclosed yard. Apart from the curtilage question, a gun can be used for the mere purpose of "scaring," but not for the purpose of killing birds.

Land, Further Purchase and Deeds (Rusticus).—A person who has bought and taken a conveyance of a piece of land is thinking of buying some more from the same owner, and wishes to know whether further conveyancing is necessary, or whether the former conveyance could be altered. The latter alternative must not be adopted. It may be an ingenious idea to save expense, but it would be a material alteration inconsistent with the original purpose of the deed which would make the previous deed void, even if it did not expose the parties to a prosecution for forgery or an offence against the Stamp Acts. Our querist, if wise, should go through the somewhat dreary performance he did on the former occasion, namely, after signing the contract and delivery of abstract, take the papers to his solicitor, who will investigate the title and prepare the conveyance, &c. Although the owner may be the same, the title to the new acquisition may be entirely different.—BARRISTER.

BOOKS.

Wild Flowers of the Hedgerow.*—The little volume before us is the first of a series of "Wild Flowers in Their Homes," and, so far as it goes, is well done. We make the remark advisedly, inasmuch as we should have liked to have seen the generic and specific names bracketed with the common or popular names of the plants as these appear either in the illustrations or in the text. The names are so given in the index, and to the student of wild flowers, as well as to the general reader, it would have been a greater convenience had they appeared as suggested. We hope we are not expecting too much in a book the cost of which is but rs., though information of the kind we have in mind adds greatly to the general utility of such a book. The contents is comprised in three main chapters, "Wild Flowers of Spring" (March—May), "Wild Flowers of Summer" (June—July) and "Wild Flowers of Autumn" (August—September). Between seventy and eighty species and genera are dealt with, and much useful and reliable information is imparted. There are also about a score of illustrations of wild flowers in

* "Wild Flowers of the Hedgerow," illustrated, by W. Percival Westrell, D.Sc., F.L.S. London: T. Werner Laurie, Clifford's Inn.

black-and-white, and some half-dozen coloured plates, which are beautifully and naturally done.

Making a Fruit Orchard in British Columbia. The author of this excellent book, who states that he is most concerned with the Apple, strongly advises against the purchase of land in that colony without it being first seen, especially as it varies greatly in quality in even limited areas. Situation, drainage and aeration also are matters of importance. Thus, a deep, flat position with bad aeration suffers from frosts; on the other hand, the side of a moderate slope is good, especially if there is a suitable soil. A north-west aspect is preferred, but where winds sweep coldly it is wise to plant breaks in the form of Norway Spruce or Lombardy Poplar to counteract the wind force. If a stream or lake is contiguous, the effect on the atmosphere is good. But in selecting sites for orchards some consideration has to be given to communications by river or rail with a town, otherwise getting produce to market or obtaining supplies may be very costly. So much sums up the pith of the introductory chapter of the book, as it includes valuable information to the intending fruit-rancher in a concise form. It is obvious that the author writes in an absolutely impartial way, and seeks to show emigrants what are the pitfalls to avoid, as further on he gives wide information as to all that has to be done once the ranch is started. In the chapter devoted to "Soils, Rocks, Water and Timber," more complete evidence of the need for personal inspection of sites is furnished. The author deals fully with land prices and the amount of capital required to start ranching. Lack of such knowledge has in the past brought many a good man to grief. Then the cost of labour in clearing land, especially of tree stumps, is shown, and reading his information as to blasting operations, the use of chain and pulley tackle, and stump-burning, we cannot envy the settler on such land or regard his lot as a happy one. The first few years of such a life must be very hard work and almost slavery. What are described as surface crops to utilise the land while the trees are growing, Potatoes and Onions especially seem to be the most profitable. Bush or soft fruits may be grown in moderate quantities, unless very convenient markets are at disposal. Poultry pays well if kept secure from predatory enemies. The best varieties of Apples to grow are mentioned, and the selection shows that supplying the British market is fully considered. Short selections of Pears, Plums, Peaches and Cherries are also given; but these play very minor parts to the Apple. Proper methods of planting trees, with descriptions of cultivation and management, follow home methods very closely. The same may be said with regard to pruning, a subject very difficult to instruct the novice in, unless he can attend ocular demonstrations. Proper spraying of orchards with fungicides and insecticides is emphasised, showing that, brilliant as the climate of British Columbia may be, it creates many troubles for the fruit-grower. We strongly commend this book to all intending emigrants to British Columbia whom its contents may specially concern. It should be a pocket companion to them on the voyage out. It is the sort of book to set all such thinking, as well as to furnish them with preliminary knowledge which it would be folly to ignore. The book is written purely in the interests of the intending settler, and as such it merits all praise and all confidence.

THE GARDEN.

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EDITORIAL NOTICES.

Every department of horticulture is represented in **THE GARDEN**, and the Editor invites readers to send in questions relating to matters upon which they wish expert advice.

The Editor welcomes photographs, articles and notes, but he will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, he will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editor asks that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editor will not be responsible for the return of artistic or literary contributions which he may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in **THE GARDEN** will alone be recognised as acceptance.

Offices: 20, Tavistock Street, Covent Garden, W.C.

NOTES OF THE WEEK.

Sir Alexander Cross, Bart.—On the next page appears a portrait of Sir Alexander Cross, on whom has been conferred the honour of a baronetcy, as announced in our issue last week. Sir Alexander is the senior partner in Messrs. Alexander Cross and Sons of Glasgow.

Rose Mme. Isaac Pereire as a Pillar.—When visiting the beautiful Rose garden at Chalkwell Park, Westcliff-on-Sea, last week, we were pleased to find this delightful old Rose grown in pillar form. The pillars were laden with the large, old rose coloured blooms, and were free of the green centres that sometimes mar the beauty of this variety. For the sake of its fragrance alone this old Rose is worthy of a place in any garden. In the autumn, when the sun is not so powerful, the colour of the blooms is almost cherry red.

Crassula coccinea.—This plant was introduced as long ago as 1710, and though numerous species have been brought to this country since then, and various hybrids between this and others have been raised, yet a good form of the true coccinea stands out superior to all of them. The fact that it has at least for the last half century been a favourite subject with the market-grower, and still holds that position, is proof positive that it is a really good thing. It is a plant of simple requirements, and one that, owing to its succulent nature, must not be over-watered during the winter months, at which time all that it needs is a temperature suitable for a Pelargonium. The nomenclature of this good old plant is somewhat confusing, for while it is usually known as above, yet it is sometimes met with as *Kalosanthus coccinea*, and in the "Kew Hand List" it is given as *Rochea coccinea*.

The Australian Bluebell Creeper (Sollya heterophylla).—The popular name of this slender-growing ligneous climber is a very appropriate one, as the bell-shaped flowers are of a delightful shade of blue. While it may be treated as a wall plant in the favoured parts of these isles, the protection of a greenhouse is, in most parts, necessary to its well-doing. In that structure it may be grown in different ways, as, if the house is not a lofty one, it has an exceedingly pretty effect when trained to the roof or rafter, the drooping blossoms being then seen to the best advantage. Besides this it may be grown in pots, and the slender shoots twined around a few sticks. In this way it will flower profusely, and that, too, over a lengthened period, while flowers of that tint are appreciated by everyone. This *Sollya* may be readily struck from cuttings of the young growing shoots, put into sandy soil and placed in a close propagating-case kept at a warm greenhouse temperature. It prefers a certain amount of peat in the potting soil. The late Mr. J. H. Veitch, in his

"Traveller's Notes," mentions that while he met with this *Sollya* freely in Western Australia, it was always as a dwarf bush and not as a climber.

The Namaqualand Daisy.—This beautiful little low-growing annual is doing better this year than we ever remember seeing it before. Plants that were raised from seeds sown in a cold frame at the end of March commenced to flower as soon as planted out the third week in May, and look like continuing the display right through the summer. The beautiful glossy, orange-coloured flowers resemble those of the *Gerberas* in shape and gracefulness. We have them planted between the *Roses* in a bed made up of such yellow varieties as *Arthur R. Goodwin*, *Duchess of Wellington* and *J. Coey*, and the effect is most pleasing. Owing to their shallow rooting they do not rob the *Roses* of much food, and are much better for *Rose-beds* than *Violas*. It is a pity that the common name of this annual is almost as unwieldy as the botanical one, viz., *Dimorphotheca aurantiaca*.

Spiraea decumbens as a Wall Plant.—*Spiraea decumbens* is a recognised favourite in the rock garden, where its pretty foliage and clusters of white flowers are always welcome in their season. It is considerably less known as a wall plant, but it may be grown with the greatest success on a wall with a considerable body of soil behind. At Monreith there is a capital plant under such conditions in the wall garden, and it was very pleasing indeed there. The difficulty with this and many other plants suitable for a wall is that of establishing it, and for the purpose young plants are best. If the wall is properly constructed, a stone may be taken out and the *Spiraea* put in with the ball of soil attached, and then a stone well jammed in about it, but so placed that any water which may fall on the wall will run towards the roots.

A Yellow-Flowered Tree Pæony.—From the firm of MM. V. Lemoine and Son, Nancy, France, we have just received a coloured illustration of a fine double yellow-flowered *Pæony* raised at their establishment between the now fairly well-known *Pæonia lutea*, a native of China, and a variety of *Pæonia Moutan*. The new-comer, which bears the name of *La Lorraine*, has, according to the illustration, a large, full flower, which, when first opened, is of a soft sulphur yellow with a salmon tinge. It has gained high honours in France, and it is a pity it was not shown at the recent "International" here, for, according to M. Lemoine, it was grown for the show, but, unfortunately, three days of tropical heat caused the buds to expand suddenly a week too soon. This is certainly to be deplored, as good new plants were none too numerous at the "International," and so many highly meritorious subjects have emanated from Nancy that one may look forward with confidence to this *Pæony* making its *début* here.

CORRESPONDENCE.

(The Editor is not responsible for the opinions expressed by correspondents.)

Birds and the Fruit Crop.—Will you allow me to suggest to the bird-lovers among your readers that during the summer season they should make a point of periodically visiting their fruit-nets, and so ensure against such of our little songsters as may have been caught there dying a slow death by hunger and thirst? It is quite a common thing to find the dead body of a bird entangled in the meshes of a Strawberry-net, and one does not like to think of the lingering death by which the little thief has atoned for his very natural greediness.—Z.

The Naming of Roses.—Under this heading (see June 15, page 304, and June 22, page 314) your correspondents protest—and that by no means too strongly—against a practice adopted by some American florists of giving fresh names to already well-known Roses. Our cousins across the Atlantic may perhaps accuse us of being the first to originate this system of the changing of names. In the eighties, when there was such a demand for new Chrysanthemums, a good deal of this was done, not only in the case of varieties from the States, but also those from France. Some of the varieties sent out by M. Delaux were very harshly dealt with in this respect, among those which I can just recall to memory being Jeanne Delaux, which was renamed F. A. Davis, M. John Laing called M. J. J. Hillier, Tricolor changed to Mr. J. Starling, and Source Japonaise to R. Ballantine.—H. P. [The practice of re-naming varieties already in commerce and disseminating the same as new varieties is dishonourable and cannot be too strongly condemned. If trade growers, either in this country or abroad, are to enjoy the confidence of the gardening public, this evil must be stamped out at once. Unfortunately the practice is not confined to Roses and Chrysanthemums, other instances, notably among Sweet Peas and herbaceous plants, also among Alpines, Orchids and fruits, have recently been brought to notice. It is in the interest of trade growers and the gardening public that we give this matter prominence in our columns.—ED.]

The Cherokee Rose.—In the issue of THE GARDEN of the 15th inst. I see that the Cherokee Rose is mentioned as originating in the Himalaya. I have always been under the impression that this Rose was a native of the Southern States of the United States. I have an idea that this Rose was so named by the Cherokee Indians, who are a tribe of American Indians. I cannot be sure that I am right, but I believe that this tribe live in Florida, and joined forces with the Spaniards in fighting against General Jackson just before the annexation of Florida. At any rate, this Rose grows all over the houses in the South below Maryland, and especially well in Florida. It is not unlike the rugosa Rose, although the petals of the Cherokee Rose are thicker and more satinlike.—F. A. S. [Rosa lævigata, a species found originally in China, but probably also a native of the Himalaya, is usually called the "Cherokee Rose." This name has apparently arisen from the specific name given to it by Donn of Rosa cherokeensis. It is semi-evergreen and not very hardy. Many other names have been given to it, including those of Camellia, camelliæfolia, hystrix, nivea, sinica, ternata and triphylla. The Rose from the Southern United States to which our correspondent

refers is probably the Prairie Rose (Rosa setigera). We may add that the "Kew Hand List of Trees and Shrubs" gives R. lævigata as the Cherokee Rose. A description of it under the name of R. sinica is to be found in the *Botanical Magazine*, t. 2847.—ED.]

The Dawson Rose.—When we had many fewer rambling Roses than we now possess, the Dawson Rose was much more popular than now, as it was then a comparative novelty, and its claims are apt to be overlooked now among the multiplicity of new wichuraianas and other ramblers. The Dawson is a neat pillar or wall Rose, soon covering a pillar well, and giving plenty of its semi-double flowers, which are borne in good clusters on nice dark green foliage. These flowers are of a brilliant rosy pink. I observe that it is credited to Messrs. Paul and Son, and as being sent out in 1898, in some lists, but I think it is really of United States origin. It has been in my garden for a number of years, coming to me as a tiny rooted cutting from the United States. It does well here on its own roots.—S. ARNOTT, *Dumfries*.

Ceanothuses Under Glass.—The note on page 302, issue June 15, is a very timely one on the subject of forced shrubs for indoor decoration. Many



SIR ALEXANDER CROSS, BART.

kinds have beautiful foliage as well as flowers, and with due care a continuous display of blossom may be had from January until they come into flower in the open borders. I consider the note referred to as timely, because cultivators must procure or prepare their plants well ahead of the time that they require them to be in bloom. During the present summer plants in pots or tubs that need it must be shifted to larger ones or be top-dressed, and, furthermore, as suggested, plunged in ashes or ordinary garden soil. The Ceanothuses are charming as pot plants, the variety C. dentatus, having a half-bushy habit, being especially suitable. Ceanothus Gloire de Versailles must not be omitted; its long panicles of blossoms are most beautiful.—B.

Rosa gigantea.—Seeing the notice of this Rose in your issue, I would mention as regards its hardiness that the plant of mine you referred to on July 23, 1892, and again on June 2, 1900, was,

when I left Reigate last June, still growing some twenty feet to thirty feet up the west side of my house. It has, however, never shown any sign of bloom. I always noticed that it never began to make its first long shoots till after other Roses, like Crimson Rambler, had already finished making their long shoots. Naturally, in hard winters it got much cut. If grown under glass it doubtless gradually acclimatises itself, as so many plants do which change their time of flowering under glass. My plant shows its hardiness, as it has survived, unprotected, for some twenty years.—J. R. DROOP.

Exhibiting Daffodils.—Concerning the much-discussed "faking"—"improvement" I would call it—of blooms for the show-bench, I submit it is a practice that should not be condemned. It is absolutely "above board"—there is no secret in it; it is open to everyone to indulge in who cares to take the trouble. Without a question certain blooms can thus be "improved." Then why not do so? No one, I presume, will gainsay that it is the duty of a flower at a show to look its best, and that it is the exhibitor's business to see that it does so. *Débutantes* would not dream of appearing at a Levée except in Court dress, and generally "looking their best." It is expected of them. So with the flowers. But there is another aspect of the matter. To penalise artistic "faking" is to penalise the "small" man and give a further advantage to the "big" man in exhibiting. To select sufficient "show" blooms from a big stock is comparatively simple. But for the small man to produce the requisite number of flowers from his limited stock good enough to compete with his big neighbour is a very different, and always difficult, matter. So often—and I speak from personal experience—one has perhaps but three or four blooms of a variety. Two perhaps are good, the others moderate or worse. Unless by "faking" one can make the bloom of moderate form passable, one must give up showing what is perhaps a good and telling variety, and suffer in points accordingly. "Faking" thus becomes a necessity for the small man, unless he is to be unduly handicapped by lack of money, and no true Daffodil-lover will wish mere "shekels" to be the main-spring of his delightful hobby.—A SMALL EXHIBITOR.

—I have followed this correspondence arising from the Rev. J. Jacob's originating article with interest, for the subject is an important one. Mr. Watts (page 226) apparently desires that "artistic arrangement" should be the determining factor of success rather than excellence of flower. But who shall decide what is "artistic"? No two people see alike. The task both of judges and exhibitors would decidedly not be enviable under such conditions. The latter would never know what particular style of "artistic arrangement" appealed to the judges. They would have no fixed point to work to. At present they have excellence of bloom as their criterion. Mr. Watts, however, appears to dislike the "fixed point" idea—he dislikes anything stereotyped; he would encourage individualism in exhibits, yet his alternative to existing methods, all said and done, is, on his own admission, only that of "follow my leader." I believe the public do not care a brass farthing for "artistic arrangement" at Daffodil shows. They do not pay their money to see artistically-arranged foliage, but they do to see the blooms; and I maintain that the existing customary method of setting up not only shows the merits (or otherwise) of the individual flower to the greatest advantage, but it also greatly simplifies the task of judging.—A. C. C. R.

Enquiry.—Will some experienced fellow-gardener advise me how to flower *Ourisia coccinea*? It grows well in my rockery (North Riding, Yorks), planted at the water edge, some in partial shade, some in full sun, but it bears very few blooms.—**DICHROMA.**

Suggestion for a Small Rock Garden.—I enclose a photograph showing how I transformed a steep bank in front of my house into a small rock garden, which may be of sufficient interest to justify its reproduction in your paper.—**GEORGE LYON, Cairnryan, Howick.**

Rosa Moyesii.—Some three years since I purchased a plant of *Rosa Moyesii*, and for the first two years it occupied a position facing south and west, getting full sun after noon. There it produced only half-a-dozen blooms each season and made but little growth, and I feared it was a bad doer and sparse flowerer. Last autumn I transplanted it in a border with an east-south-east aspect. This spring the plant has been a sheet of flower, producing some one hundred and fifty of its beautiful crimson blossoms, evoking the admiration of all who have seen it. The plant is now sending up basal shoots some five feet high, and I am hoping that next spring it will do even better than this. I may add that I give it no protection in the winter, and there is no evergreen hardier than this. I think if this lovely Rose were better known, many more would be grown than is now the case. There is no Rose that I am acquainted with about the colour of the flowers of which there is so much difference of opinion, but, however it may be described, there is no gainsaying its special beauty.—**B.**

A Useful Lupine (*Lupinus polyphyllus* Moerheimi).—*Lupinus polyphyllus* and its varieties, so long esteemed as border plants of the first merit, have recently attracted increased attention by reason of the introduction of the pink-coloured forms, of which the most distinct is *Moerheimi*. Unlike its immediate forerunner, *polyphyllus roseus*, the first-named maintains its freshness and bright colour almost up to the moment the flowers fade. Never by any chance have I noted the flowers of *Moerheimi* exhibit the muddy purple colour that so greatly detracts from the value of *roseus* as a border plant. *Lupinus Moerheimi* forms a dense bushy plant of beautiful leafage; the main flower-stems are borne on the terminal points of the shoots, and are succeeded by laterals, which also flower and continue the display from May till July. It is the dwarfiest of all the forms of *polyphyllus*, growing to a height of 3 feet. Its tapering, slender spikes of bright pink and white flowers proclaim it a plant of sterling merit and one of the most distinct of recent introductions.—**THOMAS SMITH.**

A Beautiful Speedwell (*Veronica filifolia*).—Admirers of rock plants would have observed the charming *Veronica filifolia* in some of the exhibits of alpine at the great Chelsea Show, but it is only those who can see really good plants who know its full beauty. It is a plant familiar to the writer, who once obtained it from the garden of a great Continental amateur a good many years ago. His own plant was lost through a combination of unfortunate circumstances, but while it lasted it was a source of great pleasure with its dainty leaves and its still more dainty light blue flowers. There is something almost lace-like in its appearance. The rock garden is the favourite place for this *Speedwell*; but I was greatly struck with its beauty as a wall plant on seeing it at Monreith, Wigtownshire, the other day, where Sir Herbert Maxwell has such a fine collection of alpine

growing on a terrace retaining wall. Here *Veronica filifolia* was remarkably fine. In perfect health, of good size and full of flower, it was the *beau-ideal* of a wall garden plant. It is hardly likely that it would be nearly so fine without a good body of soil behind it, but with such conditions and fully open to the light it formed a grand sight that could hardly be surpassed.

Coronilla montana.—This hardy rock plant is not, apparently, a popular one, being probably less frequently offered by nurserymen than its merits would warrant. It is a capital rock garden plant, making good sheets of pleasing leaves and giving a good display of its bright yellow flower-heads. I have never met with it so fine as on the wall garden of Sir Herbert Maxwell at Monreith, Wigtownshire. There a large plant on the retaining wall of a terrace at the garden front was in full bloom the first week of June, and was really magnificent. The mass of flower was of the brightest golden colour, casting into the shade the

THE FLOWER GARDEN.

THE HERBACEOUS BORDER.

THESE borders are now full of many beautiful flowering subjects. Constant attention should be afforded the plants. To maintain a continuous supply of healthy growth and abundance of flowers it is necessary to note and carefully minister to the wants of each individual subject. In large mixed borders, gross feeders, such as Delphiniums, Hollyhocks, Dahlias, Asters and many others, are often in need of copious supplies of liquid manure-water. Other subjects growing in light soil may require a mulch of decayed manure. The question of staking plants, so as to prevent the growths being damaged or the flowers broken off by wind, demands a good deal of careful consideration. Strong-growing plants must be provided with



ROCKWORK AND STEPS IN A READER'S GARDEN.

other yellow flowers in its vicinity, and especially bright in the sunshine. With the writer it does not flower so freely, and he attributes this to the more sunny position at Monreith, the greater heat from the wall, and possibly to the fact that there are a good many broken shells among the soil in which the *Coronilla* is planted. On the ordinary rockery it is seldom so fine as at Monreith.—**S. ARNOTT.**

FORTHCOMING EVENTS.

July 2.—Royal Horticultural Society's Summer Show at Holland House (three days). Gloucestershire Rose and Sweet Pea Show. Scottish Horticultural Association's Meeting. Epsom Rose Show.

July 3.—Royal Agricultural Show at Doncaster (four days). Croydon Show. Penarth Rose Show.

July 4.—Ipswich and East of England Show. Norwich Rose Show.

July 5.—Maidstone Rose Show.

July 6.—Société Française d'Horticulture de Londres Meeting.

strong supports. At the same time, the object should be to make these supports as inconspicuous as possible. A timely thinning of the shoots of many plants is perhaps an operation which many amateurs fail in carrying out. It is, however, the best way to obtain good results with many of the subjects which throw up numerous shoots from their base, such as Asters, Solidagos, Helianthus and many others. Weeds should never be allowed to grow in the borders, and the Dutch hoe should be plied frequently between the plants. Water should be applied copiously in the absence of rain. Notes should be taken of the habits of any recently-acquired plants. Further notes also on the border as a whole, or any particular plant which does not seem happy in its surroundings, will prove most useful later on when a general rearrangement of the plants may be carried out. One of the most difficult problems of the herbaceous border is that often experienced of keeping up a continual display with no unsightly gaps. Much may be done by filling in with summer

flowering subjects grown on in pots for this purpose. The use of annuals, either sowing the seed in the border or introducing young plants, will in many cases prove successful. It is wise to have a full scheme prepared and provided for in advance. The practice of providing borders of plants flowering at different seasons has much to recommend it; but many gardens, both large and small, possess borders which their owners desire should be made as bright and interesting for as long a period as possible. Dead flowers should be removed, and everything made tidy and neat. The hardy plants of our gardens are real subjects of beauty, and, if they are carefully tended, are capable of producing effects which will repay fully all the care bestowed upon them. Many new plants are being added to the nursery lists, and a perusal of these lists will be a source of pleasure and profit to the ardent cultivator.

C. RUSE.

Lambay Island, County Dublin.

SEASONABLE NOTES ON AURICULAS.

Fresh Air.—If there is one thing more than another that the show and alpine Auriculas appreciate at all seasons of the year it is fresh air, and the tyro in their cultivation is warned that unless he is prepared to afford it in absolutely unlimited quantities, he must not expect to attain the most beautiful results. In the winter a certain amount of discretion has obviously to be exercised in the admission of air either to a house or a frame, but in the summer let the plants have all they can get and they will be the better for it. When torrential rains are falling one would not, of course, have the light right off the frame, because the soil in the pots might conceivably be so sodden as to turn sour and thus cause serious injury, but even then the light must not be closed down, and whenever the conditions are favourable it should be open.

Cleanliness.—Notwithstanding the indisputable fact that Auriculas are among the best of all plants for culture in cold greenhouses and frames in town gardens where the atmospheric conditions, even in the most favourable of circumstances, are never too pure, there are no plants which demand more scrupulous cleanliness. The soil, the crocks, the pots, the surroundings in the structure and the plants themselves must all be spotlessly clear if excellent health, which spells satisfactory progress, is to be maintained. The grower must, therefore, spare no pains which will go to ensure the desirable condition, or he will soon see signs of deterioration in the appearance of his cherished plants.

Sickly Plants.—The careful cultivator will look over all his collection at least once a day, and if the time can be spared he will do it twice; but at frequent intervals, in no case fewer than

once a week in the summer-time, he will subject them to a keen inspection, so that he may not fail to detect a plant that is on the sickly side directly the indications are visible. The trouble may be due to thrips, red spider, the root aphid, or the stem-boring maggot, but whatever it is, instant suppression must be the order of the place. In previous notes suggestions have been made as to the best steps to take in case either of these conditions should occur, and readers who are not familiar with the management of the plants are advised to refer back and diligently study the articles.

Sunshine or Shade.—Broadly speaking, the greater majority of plants grown in British gardens

points of view it is perfectly satisfactory to do so, but they are strongly urged to devote more than the ordinary care and attention to the plants for the first two or three weeks. The precise conditions of management differ slightly in every garden, and the changed surroundings may bring an element of trouble. There is not, as a rule, anything to worry about, but it pays over and over again to be watchful as a preventive of potential disappointment.

Seed-Sowing.—It has been said in earlier articles that the seeds now developing will become ripe at some time during July, and the grower will shortly have to decide whether he will sow immediately or defer the operation until the spring; there must be no half measures in this matter. Personally, I prefer sowing directly the seeds are ready, as I find that germination is more regular and the youngsters grow forward rather stronger; but those who do not find it convenient need not anticipate that the seeds will lose in vitality or that they will not secure eventual satisfaction. It is a matter of fancy and convenience when the work should be done.

F. R.



ST. BAVO ANEMONES. A NEW RACE AFTER THE FULGENS TYPE.

ST. BAVO ANEMONES.

DURING my visit to Haarlem this spring, it was my good fortune to go to Mr. van Tubergen's nursery on a sunny morning when the whole of these glorious Anemones were wide open in all their brilliance and splendour. There was a wide range of colour, from the richest reds to pale creams, almost white, and innumerable shades of purples and blues. Growing close to them were a few beds of M. Emile Gadaceau's stellata type, but these in comparison with the St. Bavo were dull and insipid. This new race is distinguished by its bright colours, the width of its petals, and the great dark boss in the centre of each bloom which proclaims its relationship with the fulgens type. Its origin is interesting and suggestive. It is another example to add to the long list of horticultural triumphs which have had their beginning in some slight difference of colour or form which the observant eye has noted, and which patient care and selection have perfected. About ten years ago a solitary plant of *A. fulgens annulata*

revel in all the sunshine which our climate affords; but this is not the case with Auriculas. During the hot summer months it is imperative that the frame shall be given a northerly aspect, as the rays of the sun, even though there be some shade, will bring in their train troubles which the cultivator will experience difficulty in overcoming. The sunshine of winter is a different thing. Then the power is much less, and the plants will not thrive for long unless they have all the light that it is possible to afford them; but now, if it has not already been done, turn to the north.

Importations.—Amateurs commonly import plants during the summer-time, and from many

grandiflora—that strikingly handsome green-ringed, wide-petalled, Grecian type of Windflower—was observed to vary somewhat in colour and to incline to a much paler shade than the ordinary. It was marked and seed saved and sown. In the third and fourth generations further breaks appeared, and these have been added to by each successive sowing until to-day we have the new race in almost all the colours of the rainbow. I heard from headquarters two or three weeks ago that the firm had decided to name them the St. Bavo Anemones, as they have begun life within sight of the "great church" of the town whose titular saint is St. Bavo.

JOSEPH JACOB.

THE ROSE GARDEN.

BEAUTIFUL NEW POLYANTHA ROSES.

SOME charming novelties are appearing in this very useful section, and one of special beauty and charm is

Tip-Top, a most lovely blending of carmine on the inside of the petals, and buttercup yellow on the back of the petals. When it was shown to visitors recently, they exclaimed, "Why, it is a Baby Juliet!" so this will give one an idea of its novel colouring.

Mieze is another charming kind, as perfect in form as Cecile Brunner, but of quite amber apricot tints, with shades of pink and orange, and the buds before they open are almost red. An altogether charming sort.

Mrs. Taft will supplant Mme. N. Levasseur. It is a lovely soft rosy crimson colour; nice bushy habit.

White Cecile Brunner is a gem. Some of its flowers are pure white, others sulphur or chamois. It possesses all the exquisite shape of the well-known Cecile Brunner.

Jeanne d'Arc, a most free-flowering variety, with fine bunches of tiny milk white blooms. It is practically always in flower, and would make a fine plant for bordering with Jessie as a background.

Cyclope in form is like a double Primrose; its colour is deep violet purple; dark foliage.

Bettelstudent has single blooms, produced in clusters. They are deep carmine in colour, with white centre. It is a very free and effective kind.

No one should miss an opportunity of planting the larger-flowered section, of which there are now some beautiful things. They come very near to the Hybrid Teas, but as decorative subjects they are fine.

Gruss an Aachen has reddish orange buds, opening light pink. A most charming Rose of free growth.

Yvonne Rabier is a glorious pure white, one of the most decorative Roses we have had for a long time. Its flowers are quite large, almost like Aimée Vibert, but produced in big clusters, erect in growth and dense in floriferousness.

Maman Turbat is also fine, a lovely satiny pink as seen under glass, also with huge clusters produced in erect form.

These would be fit companions to the older Mosella and Clothilde Soupert, Roses not seen much now, but very lovely.

A CHARMING SINGLE ROSE.

ONE of the loveliest objects in my garden in May and early June was a fine plant of *Rosa sinica Anemone* running over old tree stumps set up for the purpose. At first sight visitors took it to be a very early-flowering Clematis, but on closer inspection, of course, they were soon undeceived. Apart from the beauty of its handsome rose pink blooms, which are often 5 inches across, the olive green, shining foliage is really beautiful, and after the short flowering season the plant remains an object of

much beauty for its foliage. We have now still another beautiful addition in Mrs. A. Kingsmill, a seedling from *R. sinica Anemone*, which is of more bushy form, and what is indeed very valuable, it is autumn-flowering. It is the second cross from a species, which is proof, if any were needed, that most remarkable results may follow the hybridising of the various lovely species with our modern ever-blooming Roses.

ROSE FRANCIS CHARTERIS SETON.

OF the many grand emanations from Waltham Cross, the above-named will, I think, prove one of the best. It has been glorious with me under glass, and for this purpose alone I can strongly recommend it. The colour is such a lovely warm cherry pink. Then, the build of the bloom is such as will commend it to exhibitors—high-centred, with tapering point in the half-open stage, fine outer petals, pointed as in La France, and with great

WISLEY GARDENS IN JUNE.

THIS is perhaps the most interesting time of the whole year at Wisley, for during the latter days of June the Roses, Pæonies, Delphiniums, the spacious water garden, the woodland and wild garden are seen in the height of perfection. From their natural surroundings, isolated position and congenial soil, the Royal Horticultural Society's gardens at Wisley are most pleasantly situated. Moreover, the gardens are bathed in the pure air for which the Surrey Hills are noted. Hence it is that vegetation of all kinds, from large coniferous trees to the daintiest of alpine, flourishes amazingly at Wisley, while many of the same plants cannot be persuaded to eke out an existence a few miles nearer London.



A CORNER OF THE WATER GARDEN AT WISLEY, SHOWING IRIS KÆMPFERI NEAR THE WATER'S EDGE.

fulness, which will make it a good "stayer" on a hot day. The growth is good and the flowers are borne upright, which is a great desideratum for a forcing Rose, and also for garden culture. Then, too, its fragrance is of that nature we used to love so much in the old Hybrid Perpetuals. Raisers would do well if they employed the Hybrid Perpetuals as seed parents more than they do; far better than to rely upon crossing Hybrid Teas with the same tribe. We should then not only obtain fragrance and size, but also some of the richer shades of colour we want so much in our present-day Roses. Another Rose that Messrs. William Paul and Son distributed last year, namely, Lady Downe, is one likely to be heard much of. This, too, is deliciously sweet, and has a fine colour, almost like Mme. Ravary in its tint, with splendid stiff flower-stems.

By reason of the distance between Wisley and any railway station (the gardens are about five miles from Weybridge Station), comparatively few visitors find their way to the gardens, but those who do so are more than repaid for their efforts. The impressions of a recent visit, together with the illustrations of these notable gardens, will, no doubt, be perused with interest by those who have not the time at their disposal to make a personal visit.

Roses at Wisley.—A long Rose walk, with dwarf Roses in the border and ramblers in the background, is now in full bloom. In the very comprehensive collection of bush Roses it is gratifying to note that such old favourites as Caroline Testout, Mme. Hoste, Mrs. J. Laing and La France still hold their own in competition with their many new rivals. The ramblers are trained over upright

rustic poles. Three stout poles, tied in at the top to form a tripod, are placed to each variety. We have on previous occasions drawn attention to this mode of training Roses, and it is certainly one of the simplest and most effective means of growing ramblers. The plants in question are yielding a profusion of bloom, and the rustic work in most instances is completely hidden from view. Three of the best varieties grown in this way are Una (white), Léontine Gervaise (apricot) and Jules Levacher (pink). A climbing plant in the Rose walk, likewise growing over rustic poles, has the misfortune to bear the name of *Polygonum baldschuanicum*. It is a rampant climber from Bokhara, and produces masses of rose-tinted white flowers in the wildest profusion. Roses do remarkably well in this delightful garden, and this is a little surprising, as the soil is of a light and somewhat leafy nature. Weeping standards are a great success, and constitute a most pleasing feature. On this page we give an illustration of the variety François Guillot, grafted about four feet from the ground, and clothed with bloom down to the soil-level. Other promising varieties growing in a similar manner are Elise Robichon, Alexandre Pirault and Joseph Billard. In view of the admirable way in which Roses grow in different parts of the gardens, it is to be hoped that in the near future the society will establish a model Rose garden at Wisley. This proposal is warmly supported by members of the society, and we wish all possible success to this praiseworthy scheme.

The Wild Garden.—The real charm of these noted gardens is found in the wild garden, which is quite hidden by trees and shrubby vegetation from the outer world. Here at every turn one meets with something good to see, and certainly worthy of study and emulation. It was this garden that its late owner, Mr. G. F. Wilson, V.M.H., loved so well. The visitor is led by way of crude paths and stepping-stones here and there

between luxuriantly-growing Bamboos and Rhododendrons, the latter flowering exceptionally well this year. Rhododendron *Wilsonii*, with small Azalea-like pink flowers, is just now a perfect mass of bloom. Kalmias, which are also peat-loving plants, are now flowering with great freedom. Some remarkably good clumps of the New Zealand Flax (*Phormium tenax*), this year producing seed in quantity, were also noted, while in the dense shade of overhanging trees many kinds of Lilies are seen. The Giant Lily (*Lilium giganteum*) and its colony of seedlings look particularly happy amid their wild surroundings. In passing what might at first sight be regarded as a neglected ditch, one observes healthy clumps of *Primula japonica*, Wood Lilies, *Trollius* and other moisture-loving plants in a congenial home, while a grand clump of *Shortia*

galacifolia near by did not escape notice. British Orchids abound on all sides in this delightful garden. One feature of exceptional interest is the naturalising of *Dictamnus albus* and *D. purpureus* in grass. The spicy-scented flowers are now seen at their best, and the illustration gives a good idea of the freedom with which *Dictamnus* blooms under these conditions.

Plants by the Water-side.—The rich and varied hues of the Japanese Iris (*I. Kämpferi*) are now

Saxifrages and Rock Roses give one an idea of the beauty this garden will attain in the course of time. An admirably-constructed dripping well is one of the chief features, while the moraine garden is sure to appeal to all lovers of alpine gardening. The latter is already planted with some of the daintiest of alpines, which are notoriously the most difficult to cultivate.

A large field of Pæonies is now gay with blossom. The new Imperial section, with outer shell-like guard petals surrounding a cluster of golden petaloids, are well represented in the collection. There are many promising varieties of Delphiniums in an extensive trial. Some have grown with most astonishing vigour, attaining a height of 15 feet. If the competition were for height, there would be many worthy competitors. As this trial has since been judged, the varieties will be commented upon in an early issue.

The gardens consist of about sixty acres of land, and not only are they noted for their beauty, but are also worthy of note from the point of utility. Several acres of fruit trees have been planted, and an outdoor vineyard has been started as an experiment. Trials of vegetables, as well as of flowers, are continually in progress, and an extensive range of glass-houses, including orchard-house, vinery, stove, Orchid-house and propagating-pits, enable all departments of horticulture to be represented.



A WEEPING STANDARD OF ROSE FRANCOIS GUILLOT IN THE ROYAL HORTICULTURAL SOCIETY'S GARDENS.

showing to the best advantage by the water-side, and Water Lilies, including *W. E. Gladstone* (large ivory white), *Froebelii* (deep red), *Marliacea chromatella* (yellow), *M. carnea* (blush pink), *Robinsonii* (rosy crimson) and *ellisiana* (rosy red), are all to be seen in the height of perfection. Our illustration on page 329 depicts a corner of the water garden, in which *Iris Kämpferi* and *Nymphæas* may be seen in flower, while the background comprises Royal Ferns (*Osmunda regalis*) and the noble-looking Gunnera with large, spreading leaves. In another direction an immense rock garden has recently been constructed. It is situated on high, sloping ground, and, when the alpines are a little better established, will doubtless be reckoned among the finest rock gardens in the country. The result of recent planting is already apparent, and the flowering patches of Sea Pinks,

retain the first and second shoots which spring through the surface each season, and that cutting shall stop at the end of June, it is not difficult so to manage the beds that they continue profitable for considerably more than a generation. The complete cessation of cutting must not, however, be accepted as meaning that no further attention need be given to the plants; as a matter of fact, this is the most important period of progress, because the foundation of next season's success is laid now. See that the soil in the beds never becomes dry; and should an opportunity arise to follow watering with a heavy soaking or two of good liquid manure, by all means seize it. In order to make sure that all food in the ground goes to the benefit of the plants, weeds must be rigidly suppressed, and in no circumstances whatever must a single shoot be cut out. In exposed

KITCHEN GARDEN.

SEASONABLE NOTES ON VEGETABLES.

Asparagus - Beds.—With the end of the present month all cutting from beds of this delicious vegetable must cease for the year. It is quite certain that many amateurs will never allow themselves to be persuaded of the immense importance of this rule, and the result is that their beds soon begin to lose vigour, and that, of course, spells lack of productiveness. If a definite principle is laid down to

positions there is liability of damage by winds, and steps must be taken to prevent it. Stout supports at intervals, with strong string stretched between, answer admirably.

Green Vegetables.—Throughout July all favourable chances should be grasped to plant the green vegetables which will prove of such immense value during the autumn, winter and spring months. The desirability of carrying out this work in showery weather cannot be doubted; but it is not wise to wait too long for the rain, which may not come for weeks at a stretch, as witness the conditions that prevailed last summer. When ground falls vacant which it is intended to occupy with these plants, prepare it immediately, allow it to lie vacant for a time to sweeten, and then get the occupants into their places as soon as can be managed. To put the roots into soil that is as dry as dust is a serious error, which the experienced cultivator avoids by heavy watering the evening before planting is to be carried out. If water cannot be afforded for the whole quarter, soak the particular places where the plants are to go. This prevents in large measure the severe check to advancement that flagging must necessarily inflict.

Celery Fly.—Careful growers have been incessantly on the watch for this pest since the plants

were first moved from the seed-boxes to the nursery beds, and it is most important that there shall be no relaxation of vigilance. It is folly to wait until the fly has pierced the leaves and deposited the egg, as one can then do nothing that is of substantial good. Instead, proceed with preventive measures, and comparatively little harm will ensue. Frequent dustings with a mixture of old soot and wood-ashes are excellent if done when the leaves are damp; but the utmost care must be exercised not to let the stuff get into the hearts, or the colour of the stems will be completely ruined.

Spring Cabbages.—The correct time for sowing seeds of Cabbages to yield most welcome produce in the early months of the spring varies with every district, and in some slight degree with every season. I am a staunch advocate of two sowings, the first on the accepted best date, and the second fifteen days or so later. This practically precludes failure due to the plants growing so freely in an open autumn that they become too "proud" to stand the variable weather of the winter. As we all sow too thickly, the double expedient need not involve greater outlay; simply divide the usual quantity into two and go ahead.

Outdoor Tomatoes.—These will demand regular attention from now onwards until the whole of

the fruits have been gathered for use. In practically all instances they will have settled down admirably, and it is important that the soil shall never be allowed to become as dry as dust; on the other hand, it is fatal to make it sodden. Each shoot that is seen springing in the leaf-axils must be rubbed out before it is half an inch in length, as concentration to one stem is essential to the finest results. Malformed flowers should be picked out directly they are seen. H. J.

LATE DWARF FRENCH BEANS.

A LATE sowing—indeed, several sowings—from the end of June well into August will provide a welcome supply at a time of year when choice vegetables are getting somewhat scarce. Of late years the Dwarf or Kidney Bean has found less favour for home supplies, on account of the taller Climbing French being largely grown; but this should not be so when vegetables of the best quality are in constant demand, as the Dwarf French is most valuable if the produce is well grown. I am aware that for market purposes it is less popular than the Runner, but for home supplies we should not study market procedure, but endeavour to get the best possible quality.

It is useless to grow this vegetable in poor soil, and heavy clay land well repays liberal additions



A FINE COLONY OF DICTAMNUS NATURALISED IN GRASS IN THE WISLEY GARDENS.

of lighter materials, such as burnt garden refuse, old leaf-soil, or spent manure, and if this cannot be incorporated with the soil, it is a good plan to place a liberal amount in each trench previous to sowing. In poor or heavy land I would advise deep drills or shallow trenches, as, grown thus, the necessary waterings and feeding to obtain good results in a dry season are readily given. In such land I have found spent Mushroom-manure an invaluable aid, as it not only lightens the soil but retains the moisture, and as the Dwarf Bean is a crop quickly cleared, unless food and moisture are given the results are poor. And this opens out another question: Why grow the Dwarf Bean when the Runner can be grown with less labour? But as a distinct second-course vegetable the Runner is less useful. The Dwarf in this respect cannot be equalled, and when well grown is delicious. By the term "well grown" I do not mean large pods, but small ones. If these are gathered regularly so that the seeds have not matured, the quality will be much superior and the pods will require very little preparation for the table.

It is a good plan to gather the pods and either place the stalk end in water or damp the pods and lay them in a cool place till required for use. A word should be given as to the cooking. Often the pods are allowed to get too old, but if they are young there is no necessity for the slicing and paring. Cooked whole they are delicious, and the flavour is then much better than when served, as is often done, with the seeds well advanced and the pods tough and flavourless.

Those who have not grown the Dwarf French for a late supply will be surprised at the good results obtained by late crops. It should be pointed out that in the culture, say, for August supplies, a cooler site or border should be selected, and thin sowing is strongly advised; failing this, thin freely so that each plant can have room to develop. It is well in dry weather to soak the seeds for some hours to assist them to germinate more quickly, also to well water the drills or trenches.

For a quick crop the smaller-podding varieties should be chosen, and for a longer supply those of the Canadian Wonder type or Magnum Bonum. For cooking whole, the Stringless Beans are a splendid vegetable. In this section there are numerous varieties, such as Holborn Wonder, Canadian Glory, Bountiful and others. The Golden Waxpod or Butter Beans make a splendid addition to the list of late summer vegetables. This variety is of great value when well grown. Such kinds as the one named on the Centenary, Golden-podded Mont d'Or and Dwarf are excellent when cooked whole as advised above.

G. WYTHES.

TREES AND SHRUBS.

RHODODENDRON VASEYI.

THIS is a comparatively little-known species, a native of Carolina. As a garden plant it is more often referred to as an Azalea, being deciduous and flowering in advance of the leaves. The individual blooms are about an inch across. The shade of colour varies considerably in a batch of seedlings, from white, pale pink or rose to occasionally a rich deep rose. The flowering season is the end of April and early in May. Like most of the



A FLOWERING SPRAY OF RHODODENDRON VASEYI, A LITTLE-KNOWN SPECIES FROM CAROLINA.

Azaleas, this one flowers freely in a small state some 15 inches to 18 inches in height, though, according to "Garden and Forest," in its native habitat the plants grow to a height of 15 feet or more. In addition to propagation by seeds, cuttings made of the half-matured growths towards the end of July will root in a propagating-frame with a slight bottom-heat.

CLEMATIS FLAMMULA.

THE delightful fragrance of this Clematis has been likened to that of the Hawthorn. It is not a tall grower; 6 feet to 8 feet appears to be about the

average height. The flowers are creamy white and about an inch across. During July and August the plants are clothed with axillary and terminal panicles of blossoms, these giving place in September and October to the heads of fruits with the familiar feathery tails. *C. Flammula*, which has been named the Virgin's Bower, is fairly well known in gardens, but not nearly so much as its merits deserve. When covering trellis-work or clothing an arbour near a dwelling-house, the air all round is perfumed with its fragrance when in flower, the beauty of blossom and seed lasting for fully four months.

It is a native of Central and Southern Europe, and has been known in gardens for more than three hundred years. For small vases the flowers may be employed effectively for cut-flower decoration, while in large vases it may be used in association with other flowers as the better-known *Gypsophila* is employed. One disadvantage is that the blossoms do not last as long as the *Gypsophila*, but they have an advantage over the last-named in being fragrant. *C. Flammula* requires very little attention in respect of pruning. In spring, when the growth-buds show prominently in the axils of the leaves, the old flowering growths should be removed down to these points.

A. O.

A CHINESE BARBERRY.

(*BERBERIS DICTYOPHYLLA ALBICAULIS*.)

BERBERIS DICTYOPHYLLA is a showy Barberry from China, which appears to have been first brought to notice by Franchet, who found it among the specimens collected by R. P. Farges. It has been in cultivation long enough to prove that it is likely to make a good garden plant, for it grows at least 4 feet high, is of good habit, and bears showy yellow flowers and conspicuous scarlet fruit. Moreover, the under sides of the leaves are glaucous, while the stems also have a glaucous hue. The variety *albicaulis*, however, is of more recent introduction. It appears to be of looser habit than the type, and the peculiarity which appeals most forcibly to the gardener who is on the look-out for ornamental

garden plants is the dense glaucous covering which appears on the stems. The under sides of the leaves are also whiter than those of the type. As it becomes better known, it ought to form an interesting addition to the list of coloured-stemmed shrubs. From this standpoint it is certainly the most conspicuous of the numerous varieties of *Berberis*. As is the case with other coloured-stemmed plants, the colour is most highly developed on vigorous branches; hence the necessity for planting it in fairly good soil. In association with coloured-stemmed Willows, Dogwoods and Brambles it is fine for winter effect.

W. D.

GARDENING FOR BEGINNERS.

THE SUMMER PROPAGATION OF ROSES FROM CUTTINGS.



1.—ROSE SHOOTS THAT HAVE PRODUCED FLOWERS MAKE THE BEST CUTTINGS.

IT often happens that the beginner in gardening matters is desirous of increasing his stock of Roses, but has no clear idea as to how the work should be done, and the following notes have been prepared for his guidance.

Rose cuttings may be taken at two different periods, namely, when the young wood is just becoming firm, about July, and when the wood is thoroughly ripe and the leaves have fallen. Cuttings of the latter kind are prepared during late autumn and early winter, and such cuttings are usually made from 9 inches to 12 inches in length and inserted in the open ground, all but the upper 3 inches of each cutting being buried in the ground. Cuttings made in summer, however, are treated very differently, for they are rarely made more than 4 inches or 5 inches in length, and are usually rooted in a frame or propagating-case, although good results may be obtained by inserting them under a hand-light out of doors. All kinds of Roses are not suitable for summer propagation. Generally speaking, those kinds which form roots quickly, such as the various Teas, Hybrid Teas, Ramblers, the less spiny Hybrid Perpetuals and the China Roses, may be increased

and the other to form a shoot. When making cuttings, cut the branch through horizontally, just below a bud for the base of the cutting, the upper part being made with a slanting cut just above a bud. Remove the lower leaf or leaves, and if the upper leaves are very large, reduce the size. Do not remove any of the buds, for it is a good plan to encourage growths from beneath the soil in the case of Roses growing upon their own roots. From the time the shoots are removed from the bushes until the cuttings are inserted, they must never be allowed to become dry. When collecting cuttings it is a good plan to have a basket partly filled with damp moss, in which the branches, and afterwards the cuttings, can be laid and covered over until ready for insertion.

Compost.—The most suitable compost for Rose cuttings is made up of three parts good, sweet loam, one part leaf-mould and one part silver sand. Whether used in pots or in beds, it must be made moderately firm, and the upper inch should have been passed through a sieve with a half-inch mesh. Over the soil a thin layer of silver sand may be placed with advantage. When the cuttings are placed in pots, the sizes known as 5-inch and 6-inch are the handiest sizes to use (see Fig. 2). As a rule, the cuttings nearest the sides of the pots root a little in advance of those placed in the centre, a fact to be borne in mind when inserting cuttings. The depth to which cuttings are buried in the soil deserves consideration, for on this a great deal depends as to whether they will root well or not. As a guide it may be added that the regulation depth for this class of cutting is that one-third of the length should be buried in the soil. When heat can be employed, the cuttings may be expected to root in from

during summer, whereas kinds which have their branches thickly beset with spines, such as the Rugosa hybrids, Scotch Roses and Moss Roses do not root readily.

The most suitable wood for cuttings is that which is becoming rather firm, such as short, flowerless shoots, branches which have flowered (see Fig. 1), or the lower parts of the long growths of ramblers which have been formed during the present year. Soft, pithy shoots are worthless for cuttings, and those of moderate growth are usually more satisfactory than very vigorous branches. Cuttings may contain from four to five buds, although if wood is scarce it is not necessary to allow each cutting more than two buds, one to form roots

two to three weeks' time. Where a propagating-house exists, heat is always available; but such a structure is not essential to success, for quite as good results can be obtained by plunging the cutting-pots in an ordinary hotbed made of manure, such as is often employed for Cucumbers. In fact, where large quantities of Roses are required in some American nurseries, the habit obtains of making up hotbeds, covering them with soil, and dibbling the cuttings in 1 inch apart each way. The cuttings are made with two eyes each (see Fig. 3), one for rooting and one for growing. The frames are kept very moist and close, but shaded from bright sun, exposure to fierce sunlight for ten or fifteen minutes being sufficient to ruin the whole bed by scalding. In from ten to fourteen days the majority of the cuttings inserted in this way have rooted, when they are gradually hardened off and potted. The pots should be plunged in Cocoanut fibre to help to keep the soil moist, and the atmosphere of the frame or case must be kept moist and close, shading being



2.—A POT OF ROSE CUTTINGS. THESE MAY BE EXPECTED TO ROOT IN FROM TWO TO THREE WEEKS' TIME.



3.—ON THE LEFT, ROSE CUTTINGS MADE WITH TWO EYES ONLY; THESE ROOT READILY IN HOTBEDS. NORMAL CUTTINGS ON THE RIGHT.

employed during periods of bright sunshine. In the absence of artificial heat, place the cuttings in a close, cold frame or under a hand-light, where they may be expected to root, but not in such a short space of time as when heat is employed. The young plants may either be potted singly and kept until the following spring to be planted out, or they may be hardened off and planted out in autumn. The former is the better method for the more tender kinds.

An item to which the propagator should pay special attention is the probability of the shoots of the young plants being attacked by green fly, even before they leave the propagating-case. At the first sign of fly the leaves of the young plants should be allowed to dry, and the house must then be fumigated with tobacco or with a nicotine preparation, fumigation being repeated at intervals if necessary.

GARDENING OF THE WEEK.

FOR SOUTHERN GARDENS.

Plants Under Glass.

Bamboos.—These, when grown in pots or tubs, make splendid material for furnishing the greenhouse or conservatory, and are also well adapted for indoors. For this purpose select those which possess the most graceful habit, and, of course, the less hardy ones may also be included, such as *Arundinaria falcata*, *A. Falconeri*, *A. anceps* and *A. gracilis*. Now that the young growths are pushing up freely, see that the plants do not suffer at the roots for the want of water, and stimulants at intervals will prove of assistance.

Chrysanthemums.—The plants for producing large blooms that were potted into their flowering pots some three weeks ago are now growing away nicely and must be secured against wind. An excellent method much in vogue is to stand a row of plants on a board beside the garden walk, and secure them to cord or wire stretched to stout stakes at intervals. If the weather is warm and dry, syringe the plants overhead twice daily. Before the plants make too much growth, insert the sticks that are to remain, choosing them as straight as possible, strong, and at the same time neat.

Pot Roses.—The plants that have done duty for inside supplies should be stood out of doors and allowed to mature their growths. See that the plants are kept supplied with water and nourishment, and keep the foliage in a healthy condition. The repotting I prefer to carry out in the late autumn.

Manure - Water.—As many plants are now needing a good stimulant, an excellent way of producing the same is to obtain some fresh cow-manure and mix it with an equal quantity of soot, adding the latter gradually until not a dry particle is left. Place in a strong, porous bag, secure the mouth, and suspend it in a tub of water. Dilute as necessary before using. Artificial manure may be given by sprinkling it on the surface of the pots, or taking sufficient for the time and puddling it with a little water, and then putting sufficient in the can to colour the water. Never apply either of the foregoing when the plants are dry, and only when they are growing and rooting freely.

The Kitchen Garden.

General Work.—The bulk of the work now to be done in the kitchen garden will consist of keeping the crops free from weeds, and whenever the surface is dry enough, ply the Dutch hoe as frequently as possible. Any vacant spaces that will accommodate a catch-crop, such as Lettuce, should be taken advantage of. All crops as they pass should not be allowed to occupy good ground, but be cleared off and followed as quickly as possible with another crop. Watering, in the event of dry weather, should be done as thoroughly as possible, and Cauliflowers and rows of Peas will greatly benefit by applications of farmyard or liquid sewage manure.

Spinach.—Make a sowing of this at the first opportunity for picking during the winter months. By sowing fairly early a good plant is ensured. Treat the ground liberally where it is to stand.

Shallots.—These will soon be ripe, and when ready lift the bulbs and lay them out in a sunny, dry position for a day or two before putting away in a cool, dry shed. Sort over and reserve sufficient of the smallest for planting next year.

Flower Garden.

Heuchera sanguinea.—A fine patch of this is one of the most useful plants we have now in the flower garden. The graceful spikes are admirably adapted for associating with other flowers, and are most useful for table decoration. To maintain a good supply, sow a little seed each year about this season in a box and allow it to germinate in a cold frame. When large enough, transfer the seedlings to boxes, where they may remain during the winter.

Border Carnations.—Keep the hoe going between the plants, and in showery weather give a dusting of soot between them. Attend to the tying of the flower-spikes as they lengthen.

Perennials.—The present is a good time for sowing any of these for the borders at a later

date, and affords considerable interest besides oftentimes obtaining more vigorous plants. They may be sown in the open ground, but it is preferable to sow in pots or boxes and keep damped and shaded in a cold frame until germinated, when the seedlings may be pricked out into a border.

Wallflowers.—The earliest-sown plants will now be ready for transplanting on to a well-prepared piece of ground that has been made fairly firm, so that the plants will make a good sturdy growth. A border facing east will suit them admirably. Plant in rows a foot apart and allow 10 inches between the plants. Choose showery weather for transplanting, if possible, but avoid their becoming crowded and drawn.

The Shrubberies.

Rhododendrons.—Now that the flowers are past, the bushes will present a much neater appearance if the old flower-trusses are picked off. If carefully done, they will readily part from the stems. Give the beds a good mulching of decayed cow-manure and leaf-mould or rough peat, as this will benefit the young growths now being formed. The same remarks apply also to Azaleas.

Ceanothuses.—These are making a good display in the shrubberies and are, practically speaking, hardy. Of *Ceanothus azureus* there are some excellent varieties, and these are well adapted for planting against balustrades and walls. Indigo, as its name implies, is a beautiful deep blue. Perle Rose is another excellent sort, as is also Gloire de Versailles, a vigorous variety.

Ononis rotundifolia.—This is a charming shrubby plant for the front of the shrubberies. It is easily raised from seed, which may be sown as soon as ripe. The Pea-shaped flowers are freely produced over a long season. It is also a suitable plant for the rockery.

Hypericum olympicum.—This is now a sheet of golden flowers, and also well adapted for the rock garden. As soon as the young growths that follow the flowering period are large enough, insert them in sandy soil and keep close in a cold frame, when they will soon root.

E. BECKETT, V.M.H.

Aldenham House Gardens, Elstree, Herts.

FOR NORTHERN GARDENS.

Hardy Shrubs.

Young Plants.—New Deutzias, Philadelphuses and any others rooted early in the year in heat and now well established in pots may be planted out in well-fertilised soil, where, before winter, they will be thoroughly established.

Ivy.—A considerable quantity of Ivy is left untrimmed till about this time, when it is closely shorn, and never fails to clothe itself with new foliage in not more than a fortnight. Where the family is in residence, this operation cannot, of course, be done at this season.

Clematis montana.—Now that the flowers are past, this early species should be hard pruned, but removing only the last year's shoots. It is best trained on arches or pergolas where the young growths can hang down, which in May and June form wreaths of lovely white blossoms.

Rosa alpina.—This early-flowering species makes a felicitous addition to the shrubbery, foliage, wood, flowers and fruit being alike handsome. It is noted for its beauty in "The Guild of Garden Lovers," but without name. It should never be pruned unless when the wood in any portion gets worn out. Given space to extend, it throws out suckers in every direction, and forms in the course of a few years a most attractive object.

Fruit-Houses.

Shading Vines.—In very hot weather do not hesitate to apply a thin shade of whiting dissolved in pure water to the glass of vineries where the Grapes are at a stage to scald. If forced upwards from a syringe, the whiting falls in spots and breaks the force of the sun's rays without unduly affecting the entrance of light.

Peaches.—Those freed of a crop may have a portion of the old wood removed, in order to give more space to that of the current year, which need not be more than required for next season's cropping. Ripening fruit may be gathered, if abundant,

before it is quite matured and stored in a perfectly cool fruit-room, where it will keep for a fortnight at least. Peaches are invariably improved in flavour when picked a day or two before being eaten.

Melons.—These will grow exceedingly fast; and after laying in a sufficient amount of growth to carry the fruits to maturity, it is very important that all the new growths which push from the axils of the main leaves be rubbed off as soon as they are large enough to handle. They are of no value to the plants, and, as a rule, are the first parts to be infested with red spider. Melons may be freely ventilated in fine weather if there is no hurry for the crop to ripen, being comparatively hardy during the summer months.

The Vegetable Garden.

Seakale.—Previous to the foliage quite covering the surface of the soil it is advantageous to apply a dressing of manure.

Peas.—As these are picked clean, the haulm should be cut over at the surface of the ground and cleared away. Besides being an eyesore, the foliage becomes a prey to mildew, which, doubtless, spreads to other crops.

Cos Lettuces.—These are better-eating than Cabbage Lettuces at this season, and they come much finer when the seedlings while still small are transplanted into very highly-manured soil. Hicks' Hardy is a variety that hearts without the necessity for tying the heads. It is a safe precaution to draw the roots through a mixture of soil and water previous to planting, and the ground should be prepared by drawing a deep drill so that they are set in soil that has not been surface-dried.

Tomatoes.—In some years these fruit fairly well when trained to warm walls, such as those of hothouses. In such instances the crop should be strictly limited to three clusters at most. It is a temptation to be always applying water, but, provided the soil is good and made firm at the time of planting, they are, as a rule, better for not being watered. It is hardly necessary to say that only the main foliage need be preserved.

Seeds to Sow.—A little Endive, white-skinned Turnips, Spinach, Lettuces and Radishes at least. All are better to have the drills saturated with water an hour or two previous to sowing, for Spinach in particular, which should be sown in extra deep drills, which need not be filled in level with the surface. Given plenty of moisture and a friable, fertile soil, the modern Spinach produces fairly large leaves even at this the worst season for it.

The Plant-Houses.

Potting.—All kinds of early winter-flowering plants should be potted into their flowering receptacles without delay.

Chrysanthemums.—Bush plants should not be stopped after this. A look-out should be kept for aphids in the points of the shoots, and tobacco powder applied should it appear. The plants will now require looking over on hot days twice daily, lest they should suffer from over-dryness at the root; all the same, do not over-water.

The Flower Garden.

Carnations.—These may now receive their final tying, and the buds be reduced in number should large blooms be essential. Border varieties in pots are now in bloom, and should be layered as soon as possible.

Lupinus polyphyllus.—There is a great variety in this handsome border plant—pink, rose, creamy white, as well as the old varieties. The primary spikes are now going over, and should be cut off before many seeds are set to enable the plant to throw up successive spikes, which plants not too old will do, provided this is done in time.

Roses.—Continue to arrange and tie the shoots of climbing varieties, which are now extending at a great rate. If standards have not yet been thinned of weakly shoots which do not show flowers, they should be removed at once. Also reduce the number of buds on very floriferous varieties, and apply another surface-dressing of quick-acting manure to enable the bushes to go on flowering, that is, to the Hybrid Teas. Take prompt measures with aphids and mildew should they appear. It is rather early in the year for orange fungus, but a sharp look-out for this also must be kept.

R. P. BROTHERSTON,

Tynninghame, Prestonkirk, N.B.

NEW AND RARE PLANTS.

FIRST-CLASS CERTIFICATES.

Lælio-Cattleya Baroness Emma.—This is a beautiful Orchid derived from the intercrossing of *L.-C. eximia* and *Cattleya hardyana*, so four species, viz., *C. gigas*, *C. aurea*, *L. purpurata* and *C. Warneri*, are concerned in its ancestry. The sepals and petals are a pleasing shade of mauve, while the large expanded lip is a rich purplish crimson, with a yellow area in the throat. Shown by Baron Bruno Schröder, The Dell, Egham.

Odontioda Cooksoniæ Fowler's variety.—A charming form of this popular hybrid, whose parents are *Cochlioda noetziiana* and *Odontoglossum ardentissimum*, but probably the latter was a very fine variety to produce such remarkable results. The sepals and petals are red, with a thin margin of a purplish hue, while the lip has a golden crest and a white front lobe. The flowers are about two and a-half inches across, and at first sight one would take it for an *Odontoglossum*. Surely the "scarlet" *Odontoglossum* has now arrived. Exhibited by Messrs. Charlesworth and Co., Hayward's Heath.

AWARDS OF MERIT.

Carnation Mrs. Husan Morris.—A self border variety of salmon rose colour, and of shapely appearance. Exhibited by S. Morris, Esq., Thetford.

Begonia James Braid.—A gloriously beautiful tuberous-rooted variety of intense crimson colour.

Begonia F. W. Walker.—A counterpart of the last, but of scarlet colouring. Both are very handsome, and were exhibited by Messrs. Blackmore and Langdon, Bath.

Begonia Golden Shower.—A drooping or trailing variety well suited to basket-work, and having the colour of Rose W. A. Richardson. Also from Messrs. Blackmore and Langdon.

Delphinium Harry Sweatham.—A semi-double variety, with medium-sized flowers of the deepest azure blue. It is very rich and telling. Exhibited by Messrs. Blackmore and Langdon, Bath.

Delphinium Lavanda.—A very distinct mauve-coloured variety of exceptional distinction and charm. From Mr. G. Ferguson, Weybridge.

Delphinium Drake.—This is a very handsome single-flowered variety of deep, clear blue, and having a conspicuous white eye.

Delphinium Tagalie.—Royal to azure blue, semi-double and very handsome.

Delphinium Lovely.—Another bold and handsome variety, of mauve and blue colour. The flowers are semi-double. This set of three came from Messrs. J. Kelway and Son, Langport, Somerset.

Eremurus Lemon Queen.—This is apparently one of the *E. Warei* forms, with self-coloured flowers of the palest lemon yellow. Exhibited by Messrs. James Veitch and Sons, Limited, Chelsea.

Philadelphus Bouquet Blanc.—A remarkably free-flowering variety, with medium-sized, semi-double white flowers.

Philadelphus Viole Lactee.—A magnificent single white, the flowers handsome and very pure. From Messrs. James Veitch and Sons, Limited, Chelsea.

Carnation Cyclops.—A very fine yellow-ground fancy variety freely overlaid with crimson. A well-formed flower of great size.

Carnation Charles Blick.—A pure white Malmaison variety which the raiser of nearly all

the Malmaisons of commerce considers good enough to perpetuate his own name. The fact should speak volumes in its behalf. It is a wonderfully fragrant variety. These Carnations were shown by Mr. Charles Blick, Hayes, Kent.

Lavatera (Malva) Olbia.—Said to be a native of Provence, quite hardy in the southern parts of England, and a true perennial. The flowers are some three inches across, and of a pretty rosy mauve, freely borne on erect stems. Exhibited by Mr. M. Prichard, Christchurch.

Rose Effective.—A pillar variety of great promise. It is of crimson-scarlet colour, large in size and very free. Said to be the result of a cross between Carmine Pillar and General Macarthur.

Rose Pink Pearl.—A single or semi-double variety of singular beauty and charm. Its name is descriptive. These came from Messrs. Hobbies, Limited, Dereham.

Odontonia St. Alban.—A fine acquisition to this comparatively new genus, created for hybrids between *Miltonia* and *Odontoglossum*. In this instance the parents are *M. fuscum* and *O. Pescatorei*. The flower is rather attractive, having a white ground, spotted and blotched with purple. From Messrs. Sander and Sons, St. Albans.

Miltonia bleuana Rising Sun.—Why this beautiful plant received the name of Rising Sun it is difficult to understand, for it is white, excepting a yellow centre. Shown by Baron Bruno Schröder, The Dell, Egham.

Lælio-Cattleya Ganymede.—This was represented by a small plant with one flower, which had apricot yellow sepals and petals and a somewhat large crimson lip for the size of the bloom. The parentage is *L. Latona* × *C. Schröderæ*, and it was exhibited by W. Walters Butler, Esq., of Edgbaston.

The foregoing were shown before the Royal Horticultural Society on June 18, when the awards were made.

AWARDS TO DELPHINIUMS AT WISLEY.

IN the Delphinium trials conducted at Wisley during the present year, the following were considered worthy of three marks by the visiting committee, and awards of merit in each case were confirmed by the floral committee at its sitting on the 18th inst.:

Delphinium Darius.—Semi-double, creamy white.

D. Cymbeline.—Dark blue, conspicuous white eye.

D. Jessica.—Intense violet blue, white eye.

D. Lorenzo.—Rich violet purple. These were sent by Messrs. G. Bunyard and Co., Maidstone.

D. Mrs. James Kelway.—Clear Cambridge blue, white eye.

D. Smoke of War.—Violet purple, very distinct, spikes strong and handsome.

D. Dr. Lodwidge.—Metallic blue, very fine. From Messrs. Kelway and Son, Langport.

D. Mr. J. S. Brunton.—Fine clear blue, with white eye; handsome spike. From Mr. B. Ruys, Dedemsvaart, Holland.

D. Dr. Bergman, Colonel Crabbe, J. S. Sargent, Mme. E. Geny and Royal Standard.—From Messrs. Forbes and Co., Hawick.

D. Lizzie von Veen.—From Mr. J. Box, Lindfield.

ANSWERS

TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

QUESTIONS AND ANSWERS.—The Editor intends to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" columns. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of THE GARDEN, 20, Tavistock Street, Covent Garden, London, W.C. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper. Plants for naming should be clearly numbered and securely packed in damp grass or moss, not cotton-wool, and flowering shoots, where possible, should be sent. It is useless to send small scraps that are not characteristic of the plant. Letters on business should be sent to the PUBLISHER.

FLOWER GARDEN.

SWEET WILLIAM FAILING (Mrs. A.).—The plant appears to have fallen a prey to the fungus known as *Puccinia Dianthi*, though its condition when received was opposed to a definite conclusion in the case. Sweet Williams for garden purposes are best if regarded from the biennial standpoint, raising a batch of seedlings each year and discarding them when the flowering is over. It is also a good plan to provide them with a fresh bed or new position each year, and so arrange matters that a complete change of soil and site is ensured to each batch of seedling plants. In this way a greater vigour results, while the failures are reduced to a minimum.

WHITE LUPINE DROPPING ITS BUDS (M. G. R.).—The failing is most probably due to some inherent weakness on the part of the variety, or to some chemical deficiency of the soil. It may be a combination of both, as in some localities the white form is singularly prone to the defect mentioned. Try replanting in autumn, and employ chalk or lime well worked in the soil previously. It would also be well to raise seedlings continually, as these we find much more reliable and less prone to bud-dropping than are older plants subjected to division. The leafy growth in Rose-buds is merely a freak of Nature. We could form no opinion in respect to the *Gloire de Dijon* Rose; the buds, as indeed all your specimens, were completely dried up. To get any idea of such things, and to be at all helpful to our readers, the specimens should be packed in damp moss so as to reach us in a quite fresh state.

TREES AND SHRUBS.

PRUNING OF RIBES AND CYTISUS (W. I.).—The various kinds of ornamental flowering Ribes require very little pruning other than an occasional thinning, which may be done any time during summer. Should your bushes become too large for their position, however, you may both thin them and cut them back as soon as the flowers have faded. The taller-growing Cytisuses should be pruned as soon as the flowers have faded. They require rather careful handling, for if cut back into hard wood they rarely do any more good; therefore do not cut the branches back below the base of the previous year's wood. In the case of old straggling bushes it is as well to do away with the plants and begin again with young stock. The dwarf kinds of Cytisus, as a rule, may be shortened a little after flowering, but Cytisus purpureus should have all the old wood removed each year to make room for young shoots, which appear from the rootstock.

THE GREENHOUSE.

SOWING SEEDS FOR WINTER FLOWERS (Seedling).—It is too late now to sow some of the recognised autumn and winter flowering subjects in order to have them in bloom at that season. Primulas sown at once will flower in the winter, but for autumn blooming, extending in some cases at least well on to the end of the year, you may sow some of the annuals that do best in pots, such as *Alonsoa Warscewiczii* compacta, *Celosia pyramidalis*, *Clarkias*, *Godetias*, *Linum grandiflorum*, *Mignonette*, *Nemesias*, *Nicotiana* hybrids, *Phlox Drummondii*, *Rhodanthe Manglesii*, *Schizanthus* and Stocks. You speak of a heated greenhouse, in which structure the seeds of Primulas, *Celosia pyramidalis* and *Nicotiana* hybrids may be raised. These, however, will only need a little heat during their earlier stages. The others had better be brought up altogether without heat, otherwise they will grow up weakly, and will consequently fail to flower in a satisfactory manner.

THE ORIGIN OF THE MALMAISON CARNATION (Constant Reader).—There is no authentic knowledge of the origin or introduction of the Old Blush Malmaison Carnation, which was the first of its race to be grown in this country. Malmaison in France was a favourite residence of Joséphine, the first wife of the Emperor Napoleon I., and the gardens were celebrated for the great number of plants grown there. Whether this variety originated at Malmaison is not known; if so, it must be at least a century old. All that can be definitely said concerning it is that it first made its appearance in this country in the fifties

of last century. For some years it was not a popular flower, the blooms being too large and misshapen for the floral ideals that then prevailed. Now, however, with the present-day taste for large blooms, it is largely grown. With regard to the varieties we now have, two or three of the oldest originated as sports from the Old Blush. One of the first to take up the raising of the Malmaison was the late Mr. Martin Smith of Hayes, Kent.

FRUIT GARDEN.

GOOSEBERRY BUSHES DISEASED (*Lady R.*).—The bushes are diseased in consequence of a virulent attack of red spider, consequent on the heat and drought of April and May. This may very well not be the only reason, seeing that your bushes growing in the open are healthy and doing well. The best thing for you to do to bring the trees round will be to pick off the fruit, and to immediately spray the trees for the destruction of the spider with the following wash, taking care to well saturate every part of the bushes. The best way of applying the wash is through a Knapsack pump or a syringe. Tobacco powder, 3lb.; soft soap, three-quarters of a pound; water, ten gallons. Preparation: Infuse the Tobacco powder in water for six hours, then strain off, press the Tobacco and infuse again. Add the Tobacco extract to the dissolved soft soap and water. Apply immediately. Afterwards give the bushes a good soaking of water and a surface mulching of rotten manure. Take away the wire-netting from the roof of the enclosure and substitute for it fish-netting when wanted to protect buds in winter and fruit when ripe in summer, but not at other times.

KITCHEN GARDEN.

MAKING A MUSHROOM-BED (*A. E. F. H.*).—A Mushroom-bed could be made at any season of the year provided the materials were ready and of the right kind. The materials consist chiefly of horse-manure or very short manure from which all the long straw has been removed. Kept apart for a time, and occasionally turned to prevent undue heating and a too early decay, we have seen excellent crops of Mushrooms produced from this material alone without spawning when subsequently introduced into warmer quarters. For example, assuming that you desired a crop of Mushrooms in September or October, the manure should be selected three months in advance, and occasionally turned, as above mentioned, during the space of a month. At the end of that time a bed of manure, 9 inches or so in thickness, should be formed under a greenhouse stage, or in a cellar or outhouse not used for human habitation. The manure should be well beaten down, and a few days later, when the heat has declined, pieces of spawn some 3 inches square should be inserted at about a foot apart over the surface of the bed, subsequently surfacing the bed with soil and making the whole quite firm. For an outdoor bed the ridge principle would be best, the making and spawning being practically the same. In this case, however, a covering either of mats or litter, or both, is essential to preserve the heat of the bed and retain those uniformly moist and warm conditions which are so necessary to success. Winter beds in the open are not suggested, though the specialist out of his knowledge can ensure success where an amateur would fail.

MISCELLANEOUS.

DESTROYING WIREWORMS (*Brendon*).—It is of no use to recommend to you the use of gas-lime to destroy wireworms, as, while it is the most destructive agent, it can only be used and dug in vacant soil, while the ground carrying crops or plants cannot be so treated. You might trap the pests. For this purpose obtain large Mangel Wurzel. Cut these up into square pieces each of about eight ounces in weight, fix into each one a stick like a skewer, 12 inches long, and so tied to the Mangel pulp that the two cannot part. Bury these portions of Mangel 4 inches to 6 inches deep in the soil wherever wireworms are in evidence, the stick standing a few inches out of the ground. Examine them every three days, lifting them carefully with a fork, removing the insects found on them and destroying them. Replace these traps in the soil, as they may be used for several weeks. You would do well to persist in the use of soil fumigants.

PRIMULAS AND OTHER QUESTIONS (*A. E. F. H.*).—The seeds of the Primulas you would probably get from Messrs. Barr and Sons, King Street, Covent Garden, or from Messrs. Thomson and Morgan, Ipswich. The Iris you submit for naming is *I. graminea*. *Myosotis rupicola* may be increased by seeds or by division of the old plants after flowering. The *Lithospermum* is best raised from fresh young cuttings inserted in August and September in a cold frame or hand-light. The Mossy Saxifrage may be pulled to pieces quite freely at any time after the flowering is past, and any portions with roots attached should be replanted. Unrooted portions might be treated as cuttings, planting them in sandy soil in a shaded frame or hand-light. In the case of divisions or cuttings it is necessary that the growth be buried up to the green of the leaves, as from this point new root-fibres issue very quickly. By inserting the cuttings sufficiently deep or by planting the divisions as suggested, compact examples result in a very short time.

NAMES OF PLANTS.—*B. W.*—1, *Cistus laurifolia*; 2, *Choisya ternata*; 3, *Quercus rubra*; 4, *Fraxinus excelsior* pendula; 5, *Euonymus japonicus*.—*Mrs. W. S. S., Beckenham.*—Rose Francois Juranville. —*Barns.*—1, Too much withered to identify; 2, *Thymus vulgaris* variegata; 3, *Origanum vulgare*; 4, *Thymus vulgaris*;

5, *Hyssopus officinalis*; 6, *Saxifraga lindleyana*; 7, *Borago officinalis*; 8, *Dianthus Rosina*; 9, *Campanula persicifolia* alba; 10, *Dianthus Mrs. Sinkins*.—*E. B. J., Dorsetshire.*—11, *Leonie Lamesch*; 14, *White Baroness*; 16, *Billiard et Barre*; the others had fallen. Please send flowers in future in a less advanced stage and pack them in damp grass.—*R. T.*—*Rhododendron nudiflorum* variety.—*H. O.*—Yes; *Iris sibirica*, it varies in colour.—*G. D. W.*—*Rubus idæus*.—*H. H. R.*—*Muscari comosum plumosum*.—*Webbery.*—1, *Ilex dipyrrena*; 2, *Scilla peruviana*.—*Enthusiastic.*—1, *Acalypha macafeana*; 2, *Strobilanthes dyerianus*; 3, *Anthurium* species; 4, *Dieffenbachia regina*; 5, *Acalypha hispida*.—*Mrs. Leo Walsh.*—1, *Geranium sanguineum lancastriense*; 2, *Geranium sanguineum*; 3, *Viola cornuta*; 4, *Astrantia major*; 5, *Sedum hybridum*; 6, *Rose White Baroness*.—*C. W. Bucks.*—Probably *Cornus amomum*.—*J. E.*—Pink The King.—*T. P. G.*—*Rose Tom Wood*; 2, *Anthemis* species.—*Mrs. L., Frome.*—*Iris sibirica* alba.—*H. J. W.*—*Rose Desire Bergera*.—*An Amateur.*—*Garden Pink Anne Boleyn*.—*J. P., Royston.*—1, *Allium Moly*; 2, *Scilla peruviana*.—*J. W., Coventry.*—*Colutea media*.—*A. G. S. F.*—1, *Carcuma* species; 2, *Hoya carnososa*; 3, *Choisya ternata*; 4, *Cupressus macrocarpa*; 5, *Asplenium Nidus*; 6, 7 and 8, too scrappy to identify; 9, *Allium scorzonnerifolium*.—*A. E. B.*—1, *Rhus cotinoides*; 2, *Ephedra distachya*.—*Mrs. C. Q., Suffolk (?)*.—No number, *Philadelphus coronarius*; 2, *Crambe pinnatifida*; 4, *Solanum jasminoides*; 6, probably a *Gleditschia* species (specimen too poor).

SOCIETIES.

YORKSHIRE GALA.

JUNE 19, 20 AND 21.

THIS important event in the annals of horticulture once more proved a great success. The rock and water gardens were, as usual, one of the most charming features, while the displays of Roses, hardy flowers, Orchids and stove plants contributed largely to the success of this great exhibition.

STOVE PLANTS AND ORCHIDS.

The competition was good in the important group class, and once more Mr. J. Donoghue, gardener to J. Pickersgill, Esq., Weetwood, Leeds, gained the premier award. It was a magnificent group, with Rambling Roses and Palms in the background, and handsome Crotons and Odontoglossums over the centre and front.

In the premier class for Orchids on a table space of 12 feet by 5 feet, plants and cut flowers were both admitted. There were three competitors. Messrs. J. Cypher and Sons, Cheltenham, secured the first prize with a very effective arrangement of *Cattleya Mossiæ*, *Lælio-Cattleya Fascinator*, *Odontoglossums*, *Brassia verrucosa*, *Oncidiums*, *Cymbidiums* and *Miltonias*. Second prize was won by Messrs. Mansell and Hatcher with a very beautiful exhibit of *Renanthera imschootiana*, white *Odontoglossums*, *Miltonias*, *Oncidiums* and *Cattleyas*.

As in former years, the classes for specimen stove plants aroused the keenest interest. The best collection of stove and greenhouse plants in bloom came from Messrs. James Cypher and Sons, Cheltenham, who in a space 20 feet by 10 feet arranged many famous examples of *Statis profusa*, *Erica ventricosa*, *E. Cavendishii*, *Clerodendron Thomsonæ*, *C. Cypheri* and *Anthuriums*. Mr. W. Vause, Leamington, came second, and he showed fine examples of *Pimelea Hendersonii* and *Erica Cavendishii*.

ROCK GARDENS AND HARDY PLANTS.

As mentioned earlier in the report, rock gardens were once more a feature of the gala. Messrs. J. Backhouse and Son, Limited, York, are to be complimented on their large rock garden and water pool; it was excellent in every respect. The old, weather-worn stones gave an air of reality to the design. It was planted with hardy Orchids and Primulas and a good assortment of the best subjects in season, with appropriate shrubs at points of vantage. Second, Messrs. W. Artindale and Co., Sheffield, who banked large masses of rock at the back, with a pathway at the foot, leading by a narrow stream. The front was gay with alpine flowers, while bold trusses of *Rhododendrons* dominated the higher parts of the background. Third, Mr. S. Pickering, 31, Rosslyn Street, Clifton, York, who exhibited a very meritorious design.

Messrs. J. Backhouse and Son secured first prize for a collection of hardy herbaceous perennials. We can, however, hardly say that it came within the category of a herbaceous border. The plants included *Pæonies*, *Liliums*, *Lupines*, *Irises*, *Anchusa*, *Pyrethrums*, *Campanulas*, *Gladioli*, *Lychnis*, *Aquilegias*, &c., all tastefully arranged. Second, Messrs. W. Artindale and Son, who showed splendid spikes of *Eremuri*, *Lupines*, *Verbascum pannosum*, *Delphiniums* and *Liliums* grouped among *Irises*, *Pæonies*, *Pyrethrums*, *Campanulas* and the like, all of excellent quality. Third, Messrs. G. Gibson and Co. Bedale.

Twenty alpine and herbaceous plants in pots.—This class was staged out of doors, and the exhibits numbered three. Much the best display was made by Mr. Walter Pybus, Monkton Moor, Leeds. His plants included *Nepeta violacea*, *Mimulus Fillingii*, *Campanula trachelium*, *Saxifraga pyramidalis* and *Achillea Ptarmica* The Pearl. Second, Mr. S. Pickering; *Cerastium tomentosum*, *Phlox canadensis*, *Geranium pratense* and *Funkias* were noteworthy plants in this group. Third, Mr. G. W. Pinkney.

ROSES.

We never remember having seen Roses shown in better form at York than on this occasion. In the class for

seventy-two blooms, not less than three dozen varieties, Messrs. D. Prior and Sons, Colchester, were the winners. A few of the best blooms were Hugh Dickson, *Chedane*, *Pemberton*, *Mrs. W. J. Grant*, *A. K. William*, *Bessie Brown*, and *Mme. Jules Gravereaux*. Messrs. F. J. Cant and Co., Colchester, came second, with Messrs. J. J. and Co., third.

For forty-eight blooms, likewise for thirty-six blooms Messrs. D. Prior and Sons were again successful.

Five competitors staged two dozen blooms, and here Messrs. Frank Cant and Co. came to the front with fine examples of *Gloire de Chedane* *Guinoisseau* *O'Donel Brown*. Messrs. D. Prior and Sons were

The premier award for eighteen Roses, distinct, fell to Mr. George Prince, whose examples of *Ethel Malcolm*, *Mrs. Hubert Taylor*, *Bessie Brown*, *Mme. Jules Gravereaux*, *W. Shean* and *Lady Ursula* were notably good. Messrs. D. Prior and Sons were second.

FRUIT CLASSES.

The most important class in the fruit section was for a decorated table of ripe fruit arranged on a space 10 feet by 4 feet 6 inches. Eight points were allowed each for black and white Grapes, Peaches, Nectarines and Pineapples, all other fruits to be given a maximum of six points. The flowers and their arrangement carried twenty-four points as a maximum. There were three competitors, and each showed well, the first prize being won by the Duke of Westminster, Eaton Hall (gardener, Mr. N. F. Barnes). The fruits in this exhibit possessed high quality, and the decorations were light and graceful. The fruits included Grapes *Madresfield Court* and *Muscat of Alexandria*; Nectarines *Lord Napier* and *Pineapple*; Peaches *Royal George* and *Peregrine*; Apples *Eatonian* and *James Grieve*; Plums *Jefferson's* and *Kirke's*; Pears *Triomphe de Vienne* and *Dr. Jules Guyot*; and Melons *Hero of Lockinge* and *Eaton Seedling*. The points awarded were: Grapes, 23; Nectarines, 13½; Peaches, 13; Apples, 10½; Plums, 9½; Pears, 10; Melons, 9; which, with 20½ points for decorations, made a total of 109 points. The second prize was awarded to the Duke of St. Albans, Bestwood Park, Arnold, Nottinghamshire (gardener, Mr. J. Edmonds). This exhibitor obtained 95 points, his best fruits being Grapes *Black Hamburg*, *Strawberry Royal Sovereign* and *Nectarine Lord Napier*.

The Duke of Newcastle, Clumber, Worksop (gardener, Mr. S. Barker), was first for a collection of ten kinds of fruits, with good bunches of *Poster's Seedling* and *Black Hamburg Grapes*, *Royal Sovereign Strawberry* and *Early Transparent Plums*.

We were sorry to note a serious falling off in the vegetable classes.

NON-COMPETITIVE.

Messrs. Sutton and Sons, Reading, had an exhibit of flowers and vegetables. Melons, Tomatoes, Peas, Beans, Marrows, Carrots, Potatoes, also other kitchen garden produce, were represented in high-quality vegetables. Large gold medal.

Robert Sydenham, Limited, Birmingham, filled rustic metal flower-holders with varieties of Sweet Peas, relieved with *Gypsophila*, an admirable method of displaying these pretty flowers.

Messrs. W. Cutbush and Son, Highgate, showed Carnations and greenhouse plants. Special gold medal.

Messrs. Edward Webb and Sons, Wordsley, Stourbridge, staged an exhibit with flowers and vegetables. Against a background of *Hydrangeas*, *Lilies* and *Sweet Peas* were arranged Melons, Tomatoes, Carrots, Beet, Peas, Onions and other produce from this firm's seeds. A central batch of *Gloxinias* and tall *epergnes* of *Sweet Peas* at either end provided a pleasing setting to the collection. Large gold medal.

Messrs. Dobbie and Co., Edinburgh, had a grand collection of Sweet Peas. The varieties included *Dobbie's Scarlet*, *Elfrida Pearson* (soft pink), *True Lavender*, *Mrs. Cuthbertson* (rose and white), *Edrom Beauty* (rose, with orange standard), *Thomas Stevenson* (a magnificent vase of this beautiful orange red variety), *Lavender G. Herbert*, *Melba*, and *May Campbell* (rose marbling on cream). Large gold medal.

Mr. C. W. Broomfield, Winchester, showed 100 vases of Sweet Peas, representing about forty varieties. Silver-gilt medal.

Mr. W. J. Unwin, Histon, showed a choice exhibit of Sweet Peas. Silver medal.

Messrs. E. W. King and Co., Coggeshall, Essex, showed Sweet Peas, having specially good vases of such fine sorts as *Mrs. Hardcastle Sykes*, *Stirling Stent*, *Thomas Stevenson*, *Constance Oliver*, *Nora Unwin*, *Mrs. Cuthbertson*, *Mrs. W. J. Unwin* and *Helen Lewis*. Large gold medal.

Miss Hemus, Upton-on-Severn, exhibited Sweet Peas and Iceland Poppies, the Sweet Peas including the varieties *Evelyn Hemus*, *Primrose Paradise*, *Helio*, *Holdfast Belle* and *Midnight*. Silver medal.

Messrs. Charlesworth and Co., Hayward's Heath, arranged a collection of choice Orchids in the special tent for these flowers. Notable plants were *Lælio-Cattleya canhamiana* alba, *Cattleya Mossiæ Wageri*, *Odontoglossum Aireworth* and *Cattleya Mossiæ reineckiana*. Large silver-gilt medal.

Messrs. Sander and Sons, St. Albans, contributed a fine group of Orchids. Gold medal.

Messrs. Mansell and Hatcher, Rawdon, Leeds, showed choice Orchids, including well-flowered plants of *Cypripedium Smithii* and *Lælio-Cattleya Martinetti*. Silver-gilt medal.

Mr. J. E. Sadler, Newbury, Berkshire, showed *Odontoglossums* and *Odontodas* in a setting of Ferns and hardy flowers. Silver medal.

Mr. Clarence Elliott, Stevenage, had a miniature rock garden planted with *Thymus Serpyllum*, *Dianthus deltoideus* albus, *Nepeta Mussinii*, *Viola gracilis*, *Campanula Miss Willmott*, and *Oxalis enneaphylla*. Silver-gilt medal.

